Croonian Lectures
ON
SOME APPLICATIONS OF PHYSICS TO MEDICINE.

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BY WM. H. STONE, M.A., M.B. OXON., F.R.C.P.,
LECTURER ON EXPERIMENTAL PHYSICS AT ST. THOMAS'S HOSPITAL.

LECTURE I.—PART IV.

CONTINUITY OF TACTILE SENSATION WITH HEARING; BRONCHOPHONY, ŒGOPHONY, AND PECTORILOQUY.

THE vibration which immediately occurs in fluids when an obstacle is placed in a flowing stream has many applications to the circulatory system, and if it have only a moderate degree of rapidity can easily be detected by the hand. Indeed, the link between tactile and aural sensation is, to my mind, continuous. Where the hand ceases, or before the hand ceases, to appreciate the vibration, the ear takes it up. The same cannot be said as between sound and heat. Before tactile sensation becomes conscious of heat there is an enormous gap after sensible vibration of a musical kind has ceased; then heat goes on continuously into light; the eye takes it up until we lose the power of appreciating it visually: the vibration still goes on, and some of our contrivances, such as photography and fluorescence, enable us still further to follow that vibration. It may not be amiss to mention *physiological* instances of sensible, but not audible, vibration. It has often happened to me, and I dare say to you, to be lounging over a chair. You put your axilla on the top of the chair-arm, and thus obstruct the axillary artery. If you entirely obstruct it, a certain amount of pain and anæsthesia, due to nerves, accompanies the action; if you contract the calibre of the artery without quite closing it, you suddenly become aware of the course and direction of the arteries down to the arches of the hand. I have frequently been enabled, from the vibration accidentally transmitted in this way, to determine by simple sensation, when the artery has been compressed, that a vena contracta and consequent vibration had been set up. I could feel the vibration by common sensation right down into the arteries of the palm. Sometimes I have succeeded in doing the same thing intentionally, though it is difficult; you can half compress the radial occasionally at the wrist with the same effect, especially if it is beating rather heavily. If you squeeze it, leaving open half the calibre, you send vibration further on into the tube, and you feel that all down the limb. It can easily be produced in veins, and we do produce it almost too easily by undue pressure of the stethoscope over the veins of the neck, in which case it has been termed the *bruit de diable*. It also occurs in some conditions of obstruction of the valves of the heart. When certain valves of the heart are obstructed, we are supposed to get, and we do get in many cases, a pre-systolic murmur; but before we get the pre-systolic murmur I am certain that we may get tactile vibration to the hand. I saw an excellent case of this kind not long ago—a case of tricuspid regurgitation,—and pointed out to some of you that there was a very distinct thrill to the hand, but no presystolic murmur. The thrill to the hand felt *discrete* and separate; it did not feel a close thrill; it was not very fine; it was a coarse vibration, such as we sometimes have over the bronchial tubes when there is a loud rhonchus; such as you can feel sometimes over the pericardium when more or less inflamed, roughened, and rubbing. Before the vibrations become rapid enough to affect hearing, they affect the sense of touch. If we can show that this is the case, we shall have established a physical fact of some importance. I think I can show you tactile vibration by means of this long india-rubber tube which is connected with the cistern. As long as the tube is without obstruction you will find there is nothing to be heard or felt in it of much importance, but the moment you establish a vena contracta the vibration becomes intense, and cannot be mistaken. In simply blowing through the tube we have, as I take it, bronchial breathing. On pressing the tube with the stethoscope we get immediately the *bruit de diable*, which again I take to be, *mutatis mutandis*, what we often hear when we press a stethoscope on the veins of the neck.

In every case of presystolic thrill and murmur it is evident that we must be dealing with some amount of hypertrophy of the heart for its production, since the force producing such vibration must evidently be in excess of the normal amount. Dr. Herbert Davies showed, in a paper read before the Royal Society in 1870, that if the areas of the four orifices of the heart be compared they indicate a decreasing momentum of the blood-current as it moves farther from the propelling ventricle, so that by the time it returns to the corresponding auricle its moving force should be entirely used up, and its flow tranquil and noiseless. The excess must be wasted energy, and thus opposed to the great natural law of conservation, and to the exact proportioning of means to end which renders nature's workmanship so perfect.

With respect to the musical vibrations excited in the thorax by the speaking voice, it would seem that simple physical experiment may afford considerable information. The first of the three named above—namely, bronchophony—is perhaps the best understood, whereas much difference of opinion has hitherto existed about œgophony and Laennec's pectoriloquy. It will, perhaps, be best to commence with that which has been most controverted—namely, œgophony.

No one auscultatory sign has been the subject of so much debate as œgophony. Every shade of opinion has been expressed concerning it, from that of Skoda, which declares it to be diagnostically worthless, up to the original view of Laennec, its discoverer, which held it to be pathognomonic of pleurisy. It has, therefore, in a sense, stood apart from the other acknowledged physical signs, and has been estimated at a variable and uncertain valuation.

No person, however, who has practised auscultation to any extent can doubt of its striking character as a physical phenomenon. Every now and then, in the examination of a case, it suddenly rings out with such force and clearness as to be absolutely startling. For this very reason, perhaps, it has been less closely studied than it would have been otherwise, the observer contenting himself with substantiating the fact and passing on to other indications.

It has long occurred to me that this, as well as many other of our auscultatory phenomena, required re-examination in the light of modern researches, specially those of Helmholtz, on acoustics. I have endeavoured, on his method, first to analyse the sonorous elements into their constituents, and then to reconstitute the whole results by a synthetical process of a mechanical nature. It was just in this fashion that the distinguished physicist in question attained to his great discovery of the formation of vowel-sounds during articulate speech; first, by applying a series of "resonators" to decompose the compound sound; and then, having isolated its harmonic elements, recompounding these in such a manner as to reproduce the original effect. This method has the greatest attainable accuracy, and all but equals mathematical demonstration.

It is now some years since I made the first step in this direction by testing the transmission of musical sounds through healthy and diseased lung. The observations were published in a medical periodical. I there showed that we were at once able to separate two very distinct phenomena, which are of necessity combined in auscultating the voice—namely, vocal fremitus and vocal resonance. The former of these is vibration of a coarse and violent kind, transmitted from the vibrating larynx through the tissues, like the pre-systolic thrill described above, and sensible to the hand placed over the pectoral region. The fact of its transmission through solid tissue, and not by the air-passages, is shown by its being distinctly felt all over the head of the person speaking, and by the curious observation which I have since noticed, and have now to record, that it is very distinct all over the head during the utterance of a "falsetto" note in what has always been appropriately called "the head voice," a note which entirely fails to produce any vocal fremitus over the thorax. Vocal resonance, on the other hand, is admitted to depend mainly, if not wholly, on the column of air in the trachea and bronchial tubes vibrating after the fashion of an organ-pipe. The mechanism of its transmission through healthy or solid lung has been the subject of much discussion, especially by Skoda, and will be adverted to farther on.

The method adopted for filtering off, as I may say, the coarser fremitus from the finer musical sounds consisted in the use of a pitch-pipe placed between the lips, and made to utter its note by drawing a deep inspiration. The column of air was thus inspired in a vibratory state, which, by the way, is quite sensible to the delicate nervous apparatus of the tongue. However loud the note thus sounded, and however distinctly transmitted to the ear, it fails to produce any thoracic fremitus. The metal tube of the pitchpipe can be felt to vibrate, and the vibration extends to the soft tissues of the lips for a short distance, but is soon extinguished, and is only slightly felt over the head. Even this slight conveyance of fremitus can be obviated by inserting the pitch-pipe into a piece of vulcanised india-rubber tubing, and inspiring through the other extremity.

In the paper referred to above I pointed out that the establishment of what may be called an artificial larynx might prove of value in auscultation, where the natural organ was injured by disease; and also by enabling us to produce the same note in every case without being obliged to allow for the great discrepancies of bass and treble, male and female, infantile and adult voices.

I have since found that it leads on to an observation which is, to my mind, of considerable interest, not only in a physical point of view, but also as bringing into harmony the disagreement which has long existed respecting the diagnostic importance of œgophony. There are, indeed, many other applications of the method, which I do not propose to enter into on the present occasion; some being still under examination, others too bulky for my allotted space. The discussion of œgophony so far stands alone that it can without violence be dissociated from kindred phenomena.

For the better investigation of musical sounds, I obtained what is called a chromatic pitch-pipe, on Eardley's patent, by means of which the pitch can be altered more than an octave, from F in the bass stave, a note on which many male voices speak, up to F of the treble stave, which is within the compass of most or all female voices. The experiments were made with every note of this register, so as to avoid the fallacy which might arise from the transmission of one note and the non-transmission of another.

I was early surprised to find how little the musical sound was conveyed. Even over a lung solid from pneumonia there was hardly any transmission, usually none whatever. This fact at once disposed of the old and before-refuted fallacy that consolidated pulmonary tissue conveys sound better than the same tissue in a healthy state. I have long satisfied myself that Skoda's absolute negative to this effect is perfectly true, and can only feel astonishment at the vitality of the error. No doubt bronchophony as a crude fact exists, but the very simplest experiments will prove to anyone who thinks it worth while to try them that either Skoda's doctrine of consonance or some other must be found competent to its explanation. With a pure musical note, such as that of a pitch-pipe, from which vocal fremitus has been cut off, bronchophony only exists in the neighbourhood of the large bronchi, even where the lung is extensively pneumonic. In phthisical cases there is more transmission, though the complications with cavernous and cavernulous sounds render the subject too long for the present moment, and, indeed, require further investigation. I may, however, state provisionally that every now and then a cavity, if empty, and communicating freely with the bronchi, seems to possess the same key-note as that sounded, and reinforces it powerfully, while it is quite silent to other notes. This reinforcement can often be brought about by varying the note, and in some degree affords a measure of the size and condition of the vomica.

At first I felt somewhat disappointed at these negative results, and more so at finding that the pitch-pipe produced no evidence of œgophony, even where it was marked with the speaking voice, and the other signs of pleurisy were distinct. But it occurred to me to reduce the voice to the same conditions as the pitch-pipe, by making the patient sing or intone a note. Here there were great difficulties in my way; most of the lower classes, from whom hospital patients are recruited, being uneducated, and profoundly unmusical. Many of them, therefore, resented what seemed an ill-timed jocularity on my part; some were shy, and others, with the best will in the world, produced a groan or screech which lacked every possible musical character, and was open to all the inflections and complications of the speaking voice. With patience I succeeded in obtaining from a patient with chronic pleurisy a good intoned bass note, about A or G. Then I found that this, like the pitch-pipe, produced no œgophony, although the phenomenon was perfectly distinct whenever he spoke in his ordinary conversational tone. I was thus led to notice that the ægophony did not occur with every sound, even of the speaking voice, but came and went, and again returned, according to the syllable pronounced. I then tried the converse experiment: having made him sound a note without vocalising, I asked him to whisper loudly; the œgophony was immediately distinct, and almost painful in its clearness. Now, whispering is vocalisation pure and simple; it is articulate speech made entirely in the mouth and fauces without any laryngeal ground-note; to this, œgophony, absent from the musical sound, seems to belong.

Whatever may be the correctness of my coming explanation, I can honestly affirm the above facts to be mere matter of observation. In this case, that of Joseph H——, of which I propose to give my notes farther on, and in another, that, of George F——, now under my care, I have demonstrated the condition described several times to a large class of students, and Joseph H—— went with me by appointment to the house of my colleague, Dr. Bristowe, for examination. Dr. Bristowe was able to confirm, in every respect, the presence of the sounds as given above, and of some which shall be presently mentioned.

Having obtained this clue to the mechanism of œgophony, the next step was to test the explanation by reproducing the sound artificially. A piece of india-rubber tubing was obtained somewhat over a yard in length and nearly an inch in bore. Over this was placed a bladder or a small india-rubber bag containing water. A mouth-piece like that of an ordinary speaking-pipe was adapted to the end of the tube, and by its instrumentality notes of various kinds were transmitted into it. The ear, or, still better, the stethoscope, was steadily applied to the upper surface of the water-bag, and the effects noted. As in the lung, a pure musical note, whether of the voice or of a pitch-pipe, was hardly at all transmitted; I say hardly, because from the elasticity of the india-rubber it was impossible to prevent some transmission of vibration through the solid containing wall. This was easily distinguished from that passing through the water after a little practice. When, however, spoken words, containing vocalised sounds were used, the œgophonic twang reappeared in startling force and distinctness; indeed, combinations of words could be formed expressly calculated to develop the phenomenon.[1]

If the india-rubber tube was flattened by pressure, or naturally took an oblate form, the œgophony became more distinct, the flat side tube apparently acting as a vibrating membrane.

On analysing the sound transmitted, the principal point to be noted was the raising of its pitch. This was usually to the extent of a minor third above the note heard by the open ear; but it seemed also to be accompanied by a squeaking or bleating sound due to the presence of notes some octaves higher, and too remote for their exact pitch to be ascertained. The same observation was very clearly made in some of the pleuritic cases examined, of which I proceed to give a few notes.

CASE I.—Joseph H——, aged twenty-six, engineer, had been under my care in February, 1871, for chronic pleurisy, for which I had ordered his admission into the hospital. He remained some months under the care of Dr. Clapton, and left on May 10th, not materially relieved. The general symptoms were not very urgent, and he was a ruddy, healthy-looking young man. The left side of the chest was evidently distended and fuller than the right. It was universally dull on percussion. Breath sounds of a feeble though fairly healthy character were audible down to the base, apparently the lung being tied down by old adhesions, and therefore not forced upwards by the fluid. With his ordinary speaking voice there was distinct ægophony. On making him sound a pitch-pipe by inspiration no sound whatever was transmitted. After some little trouble I taught him to sing a note in unison with me. Directly the tone became musically pure, and what a singer would call a good note, the œgophony disappeared, returning more or less when his voice failed and the tone became uncertain. On June 7th I took this patient to the house of my colleague

[1] This experiment was exhibited in a somewhat improved form at the lectures. The speaker was enclosed in a padded box to deaden the direct transmission of the voice, and an enlarged portion of the conveying tube was perforated with holes beneath the bladder.

Dr. Bristowe, with a view to more careful observation. Dr. Bristowe confirmed the physical condition, which was moreover testified to by Dr. Clapton's notes during his stay in hospital.

Besides the facts above stated, we elicited the following facts: With the broad *â* or rather *ah* used by singers, there was hardly any œgophony. With the sharp *à* (as in the word "April" or "apron") it immediately became distinct. With the sharp *é* also (as in "easy") it was more marked. With the *u*, or *oo*, as in "use" or "ooze," it was the most remarkable of any; because apparently the notes on which these closed vowels are spoken lie much lower than those of *à* or *é*. When at Dr. Bristowe's suggestion I made him whisper, the conveyance of a high-pitched sound was singularly clear and striking.

This patient continued for a month or two more under my care. Vocal fremitus, at first absent on the affected side, became slightly perceptible, but otherwise he altered little.

CASE 2.—James L——, aged twenty-five, horsekeeper, came to the hospital on October 10th, 1871, with symptoms to albuminuria. The face, legs, and scrotum were very œdematous; the breath was short, the urine abundant, containing much albumen. On his first visit there was dulness and pneumonic crepitus at the base of both lungs, most marked on the left side. On the 26th the dulness was marked over the lower third of the left lung; there was no crepitus beyond slight creaking at the end of a deep inspiration. Vocal fremitus was abolished in the same space. With the speaking voice there was a combination of bronchophony and œgophonic twang, the result being that the note heard through the stethoscope was of a distinctly higher pitch than the ordinary voice, and of a different character. On making him sound a pitch-pipe no sound whatever was transmitted.

CASE 3.—George F——, aged twenty-eight, brewer's servant, made out-patient on Oct. 26th, 1871, with signs of pleurisy. He suffered from cough, pain on the right side, short breath, with rapid emaciation and profuse night-sweats; no hæmoptysis; the apices of both lungs were normal. On the right side there was complete dulness over the lower two-thirds, no vocal fremitus, and high shrill œgophony. On measuring the musical interval between the transmitted and the natural note, it was found to be a minor third higher. There was no transference whatever of the vibrations from the pitch-pipe, though vigorous and continued inspiratory efforts were made. This patient only attended twice, with some improvement. The sounds were easily demonstrated to a large class of students, and it is probable that he objected to the examination.

I am anxious as much as possible to separate this first part of my paper from any explanation which I now proceed to offer. The facts as hitherto stated are simple and easily demonstrated, utterly independent of views or theories, and perhaps susceptible of other solutions than mine. But on considering the curious, and, I believe, new observation, that a pure musical vibration within the limits of the ordinary speaking voice is not transmitted at all, either through consolidated lung or through a layer of pleuritic fluid, but that the same note, when vocalised and modified by the addition of vowel sounds, immediately passes through the obstructing media at a changed pitch, I cannot avoid connecting the phenomena with Helmholtz's discoveries as to the mechanism of vocalisation. I need not recapitulate his views more than to remind my readers that he finds all vowel-sounds surrounded with numerous remote harmonics. Many of these vowels he has succeeded in reproducing from a series of tuning-forks kept in steady vibration by electrical agency. He specially states that he experienced a difficulty in obtaining the E and I sounds, until he reinforced the extreme high harmonics at the expense of the fundamental notes. Now, these are exactly the sounds on which œgophony is most distinct, whether in a living lung or in an artificial india-rubber substitute. I am therefore led to the impression that œgophony has the same, or rather the converse, *modus operandi*: that the layer of fluid, while it stops the larger and coarser vibrations of the ground-tone, lets pass the finer and closer undulations of the high harmonics. We thus have phenomena in what we may call an ascending scale, beginning with the rough vibration of vocal fremitus, which, like some forms of loud cardiac murmur, is actually sensible to the tactile papillæ of the finger, but which is easily intercepted, through the phenomena of vocal resonance which are more penetrating, up to œgophony, which is thus explained to be vocal resonance divested of its lower fundamental tones by the deadening effect of a layer of more or less inelastic fluid. Therefore I was led early in the paper to name it a filtration. It is thus not dissimilar in kind from that which in a transparent medium, like glass, obstructs the undulations of sound and heat, but gives free passage to the finer and more subtle pulsations of light.

My colleague and former teacher, Dr. Bristowe, has most ingeniously completed this branch of the subject by his explanation of pectoriloquy. He considers that in this last the whole sum of the vocal vibrations, both ground-tone and harmonic, are poured at once into the stethoscope. Bronchophony, therefore, would consist mainly, if not entirely, of laryngeal vibrations; œgophony mainly of the affiliated upper partial tones from which the fundamental laryngeal tone has been filtered off by a layer of fluid; and pectoriloquy would represent the two elements combined.

CASES OF PHTHISIS TREATED AT HIGH ALTITUDES.

BY C. THEODORE WILLIAMS, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION, BROMPTON.

THE treatment of phthisis by residence at high altitudes has long prevailed in Europe and America, and has become as well established in Peru and in North Germany as the custom of sending children to the sea in summer is in England. If a Frankfort shopkeeper contracts a bronchial catarrh which he cannot shake off, he immediately hies to Davos, and remains there till his symptoms or the contents of his purse have vanished, and he has a firm conviction that no other form of treatment is at all equal to the mountain cure.

It is, however, curious to note that while Germans, Dutch, Russians, Italians, and Americans, have freely had recourse to this form of treatment, the British, in spite of the advocacy of Archibald Smith, Hermann Weber, Symes Thompson, Clifford Allbutt, and others, including myself, have been slow to give it a trial, and it is only within the last two years that English invalids in any numbers have wintered at Alpine stations.

Now the tide of fashion seems to have turned, for a rush appears to be made to the opposite extreme, and instead of too few English consumptives resorting thither, too many, and I fear among them often unsuitable cases, will flock to the high altitude stations.

It is for the purpose of giving a note of warning that I write this paper, narrating briefly a few cases to exemplify the good and the harm done by this treatment, adding only so much meteorology as will serve to explain the nature of the climatic forces in operation. The climate of high altitudes varies greatly in different parts of the world, according to latitude, height above the sea, nearness to the ocean, shelter, soil, &c.; but at first it will suffice to consider one region—namely, Davos in the Grisons,—which place, on account of its accessibility, is now the most frequented by consumptives in Europe.

Davos lies at a height of 5200 ft. above the sea level, in a wide valley, running N.N.W. and S.S.E., sheltered on all sides, except to the S.E. The snow generally falls at the end of October, and the ground is deeply covered till March, except when visitations of the Föhn, or south wind, melts portions of it for a day or two, a trying event for patients, which has occurred several times during this last exceptional winter.

With the influence of vegetation thus entirely removed by this glittering and reflecting layer of snow, and with the air still, as is usually the case, and the sun shining brightly through the rarefied atmosphere, we get that remarkable group of phenomena which characterise the climate of alpine regions, and exercise a decided effect, beneficial or otherwise, on the human body. The first element of importance is the rarefaction: the barometer ranges from 24 to 25 inches pressure, instead of from 29 to 30 inches, as at Greenwich; water boils at 200° Fahr. instead of 216° Fahr.; and man's respirations, instead of being 16 per minute, are 20; and his

pulse, instead of averaging between 70 and 80, ranges from 80 to 90. The second element is the dryness; and this results principally from the low temperature, but also has other causes. The third is the intensity of solar radiation—this being the most remarkable feature, and one which can hardly be realised without being felt. This is measured by a blackened bulb thermometer; which consists of a small thermometer blackened at the bulb and enclosed in a large vacuum tube, the blackening being for the purpose of increasing the effects of the sun's rays. The observations on this instrument have sometimes been noted at Davos as high as 165° F., and in midwinter are frequently over 130° F. To illustrate this, I have arranged a table in which are compared the results of this last winter, 1878-79, at Greenwich, Cannes, and Davos. For the Cannes observations I am indebted to Dr. Marcet, and for those of Davos to Mr. Gunnery.

SOLAR RADIATION.

—	Greenwich.		Cannes.		Davos.	
	Mean.	Max.	Mean.	Max.	Mean.	Max.
Nov., 1878	59·8° F.	79·9° F.	96·6° F.	122° F.	111·1° F.	157° F.
Dec., 1878	48·8° F.	61° F.	86·8° F.	105° F.	90° F.	133° F.
Jan., 1879	43·4° F.	63·8° F.	90·7° F.	119° F.	110·7 F.	141° F.
Feb., 1879	59·4° F.	81·4° F.	101° F.	121° F.	113·6° F.	106·5° F.

Here we see the enormous difference which a clear, somewhat rarefied atmosphere gives over a foggy one like that of Greenwich; but we also see that even Cannes, with its sunny exposure and large reflecting surface of the Mediterranean, does not furnish such high figures as this mountain station encompassed by what may be a far more powerful reflector—the glistening garment of snow. That this great solar radiation does not raise the temperature of the surrounding atmosphere is shown by the low figures which the maximum in the shade gives; these being often below freezing point, while the black bulb points to 130° F., and consequently the snow remains hard, with no sign of melting, though it is probable that considerable quantities pass into the atmosphere by evaporation, forming those light fogs which Professor Frankland[1] has shown to consist of minute snow-crystals. In the sunshine invalids can bask, even sitting out of doors for hours when there is no wind. At night the temperature falls very low indeed, 9°—i. e., 41° F. below freezing point—being sometimes reached; and this, in connexion with the high sun temperature in the day, infers an enormous range of radiation, due principally to the rarefied atmosphere.

To sum up, Davos, as well as the Engadine stations, which only differ from it in being less well sheltered from cold winds, has a winter climate of which the characteristic is a still, cold, and dry rarefied atmosphere, easily permeable to the full effects of solar radiation; but, to receive benefit from a residence there, it is evident that a certain degree of constitutional strength, as well as a fair amount of unimpaired lung surface, must co-exist.

The following cases are illustrative of the influence of the climate of Davos, and also of Bloemfontein and the South African uplands.

CASE 1.—Mr. R. S. G——, aged twenty. Seen with Dr. Calthorp, of Hornsey-lane, July 4th, 1878. He had pleuro-pneumonia six months previously, and a second attack a month later; but was well enough to pursue his studies, with slight cough. Two months ago had hæmoptysis to the amount of an ounce and a half. Has lost a stone in weight since January, his weight being now 10st. 10lb. The left chest measured an inch and a half less than the right at the mammary level; slight dulness and crackle detected above the left scapula. He was advised a sea voyage to Australia (or, in the event of that being impossible, to spend the winter at Davos). On Sept. 16th I saw him at Crouch-hill with Dr. Hewer. [He had had two more attacks of hæmorrhage—one at Hastings to the amount of half-a-pint, the last less in quantity. Seemed much prostrated and very nervous; cough troublesome; temperature normal; physical signs the same. He was ordered cod-liver oil in dilute nitro-muriatic acid and calumbo, and, as a sea voyage was impracticable, to winter in Davos. Weight 9st. 13lb. On Dec. 21st I examined the patient at Davos with Dr. Ruedi. He has now scarcely any cough; breath good on exertion; can walk over six miles and skate. Complains more of palpitation of the heart than anything else; slight dulness and bronchophony above scapula. Weight 11st.—a gain of 15lb. since arrival. Pulse 84; respirations 20. March, 1879. Heard that he continued to improve till lately, and gained up to 21lb., his weight reaching 11st. 6lb. The melting of the snow prevented him taking his usual walking exercise, and, feeling not so well, he quitted Davos for Veytaux, near Lausanne. Here his cough increased, and the expectoration was noticed to be tinged with blood. These symptoms passed off, being apparently due to the recent catarrh, and he reached England April 10th, when I examined him and took the following note:—No cough or expectoration. Looks ruddy and vigorous. Weight 10st. 11lb., having lost 9lb. in his recent catarrh. Left side of chest measures half an inch more than the right; no dulness, bronchophony, or crepitation can be detected anywhere. Inspiration harsh and long over old seat of lesion. Breath-sound is remarkably clear over the whole of the lungs.

This was an instance of hæmorrhagic phthisis in the form characterised by large hæmoptysis and small pulmonary lesion arrested by the influence of the mountain air, and confirms the views of Dr. Hermann Weber and Spengler that the altitude does not predispose to hæmoptysis, for though this patient had suffered repeatedly from this symptom in England, and though he took a great deal of violent exercise at Davos, yet during his five months' residence there no sign of this appeared. He appears to have suffered from his descent to lower levels, which induced catarrh and some loss of weight. His gain of weight was very large at one time, amounting to 1½st. The local effect of the climate showed itself in an increase in the circumference of the affected side, amounting to two inches, and in the diminution of the dulness.

CASE 2.—Mr. E——, aged twenty-two, a wine merchant, consulted me on July 16th, 1878, by the advice of Mr. Hallam, of Sheffield. He had enjoyed good health till ten months previously, when, after descending into a coal-pit, he had pleurisy followed by continuous cough. In Feb. 1878, after hæmoptysis (two ounces), he began to improve and gain flesh on cod-liver oil, and previous to my seeing him had regained 5 lb. Aspect ruddy; cough troublesome; expectoration yellow; appetite good; weight, 10 st. 8 lb.; breath somewhat short on exertion. There was dulness, flattening, and crepitation in upper third of the left chest, front and back. The heart's apex was slightly raised; right side, at level of second rib, measured 17 in.; left, 16 in. Ordered to continue oil, with iron and quassia, and to blister the left side of the chest.—Sept. 30th: Cough easier; dulness diminished; less crepitation; breath freer.

In this case the diagnosis pointed to catarrhal pneumonia, with small excavation, and subsequent contraction of the side, previous to my seeing him, as otherwise the difference in the girth of the two sides in the upper regions of the chest and the raising of the heart's apex could not be explained; for were it dependent on the pleurisy the lower part would be most contracted. Ordered to Davos.

Dec. 21st, 1878.—Saw him at Davos with Dr. Ruedi, and found him much improved. He walks, sleighs, and skates daily; weight 11 st., being a gain of 6 lb.; has lost cough. Pulse 80; respiration 20. On the left side there is slight dulness over clavicle and in first interspace, with bronchophony. There is slight dulness and bronchophony above the scapula, with distant crepitation on cough. The chest measurements show no further contraction of the left side, but rather the reverse, a slight increase being noted in the upper portion.—March, 1879: Heard that he was improving, and walked fourteen miles at Davos without fatigue.—May 23rd: He quitted Davos at the end of March, and went to Baden-Baden, where he passed a month, taking walks of from fifteen to twenty miles daily in the Black Forest, eating and drinking rather too freely. He now appears the picture of health, but still has a slight cough, and grey expectoration in the morning, and complains of the heart throbbing violently. Pulse 74; respiration and temperature normal; weight, 10 st. 11 lb. The measurements are as follows:—At the level of the second rib: Right side, 17 in.; left, 17 in. At the level of the mamma: Right side, 17 in.; left, 17 in., being an increase of an inch on the left side, as compared with the measurements of the previous July. There is no dulness on the left side, but slight bronchophony and emphysematous crackle to be

[1] Proceedings of the Royal Society, 1874.

detected in the first interspace. There is slight dulness, bronchophony, and crackle above the scapula. Heart's impulse very prominent.

This was a favourable case from the beginning, as the cavity had commenced to contract before the patient reached Davos, but improvement, both general and local, proceeded more rapidly in the mountain air, and his walking powers were increased. The change in the physical signs was characteristic of the climate, increase in the circumference of the contracted side, with diminution of dulness, pointing very decidedly to the development of emphysema around the old cicatrix.

Mr. H. S——, aged forty, was sent to me July 24th, 1878, by Mr. Jardine, of Capel, with the following history: "Has had a cough three years, commencing with hæmoptysis, which lasted several days and amounted to several ounces. At the beginning of his illness he lost flesh considerably. He went a voyage to Australia, and for two months suffered so much from sea-sickness that he lost weight, which, however, he regained on the return voyage. He passed the next winter at Ajaccio with no great change in state." There is flattening and dulness over the upper half of right chest; cavernous sounds audible from first to third ribs; crepitation below on cough; tubular sounds to be heard above left scapula. Measurements of both sides of chest equal; weight 8 st. 13 lb. Cough troublesome; temperature normal; appetite bad. Takes hydrated oil and applies iodine to the chest. Advised to continue oil with a bitter tonic; to pass the winter at Davos and the spring at Ajaccio or San Remo.—Dec. 22nd: At Davos with Dr. Ruedi. Complains much of the cold, and says he never can get warm; cough is very troublesome; face almost livid; hands and nails blue; temperature subnormal; weight the same; chest measurements the same; pulse 70; respirations 20; physical signs about the same.—June 18th, 1879: In February he had right pleurisy lasting three weeks, when he was confined to bed, and the temperature rose daily above 100° F., and he lost weight and strength considerably. At the end of March he went to Baden-Baden, and thence to Bonn, where Mr. Jardine visited him and found him very prostrate. He reached England safe three days ago, and I found his cough very troublesome; expectoration scant; temperature 100° F.; pulse 100; respirations quickened; weight 8 st. (a loss of 13 lb.); emaciation marked. Measurement of the two sides of the chest the same. Right side: cavernous sounds as before, but crepitation audible over whole lung, with some friction-sound. Left side: crepitation in first two interspaces.

This case is an example of the patients to whom a high altitude is unsuitable. Owing to the large amount of lung involved and to the advanced state of the disease, the patient had not sufficient lung surface to effectually aerate the blood in the rarefied atmosphere, and at the same time his feeble circulation rendered him unfit to withstand the extreme cold, which induced fresh catarrh and tuberculisation, of which the pleurisy was a symptom; his appetite was not stimulated, and the whole effect on mind and body was of a depressing character.

(To be concluded.)

TWO CASES OF

AORTIC ANEURISM TREATED BY GALVANO-PUNCTURE.

BY DAVID DRUMMOND, M.A., M.D.,
PHYSICIAN TO THE NEWCASTLE-ON-TYNE INFIRMARY.

ALTHOUGH the following cases were unsuccessful, yet I think they are worth recording, inasmuch as they bear upon a plan of treatment perhaps not thoroughly understood, and certainly not extensively adopted, by the profession so far.

CASE 1.—J. P——, aged forty, a stonemason, was admitted into the Newcastle Infirmary in April of last year, with an aneurism of the ascending portion of the thoracic aorta. It is unnecessary here to enter into his history more than to state that he dated his illness back five or six months, when he had first felt pain "below the breast bone," and suffered from shortness of breath. There was slight prominence and pulsation on the right side of the sternum corresponding to the second interspace. He was treated by twenty-grain doses of iodide of potassium three times daily, which was afterwards augmented to forty-five-grain doses; rest enjoined as far as possible. This plan was continued for about three months, during which time the sac slowly increased.

The patient now left the infirmary, but presented himself for readmission eight weeks afterwards. He was again put on the same treatment, which was continued with but few short interruptions—i.e., when the drug seemed to disagree—until December, in all over six months; but nevertheless the sac continued slowly, though steadily, to increase. The bulging of the second and third ribs beside the sternum on the right side had become much more marked, whilst the pulsation was considerably exaggerated. The whole of the right thorax anteriorly was dull on percussion, the dulness extending to half an inch beyond the left para-sternal line, on a level with the second rib. The pulsation was still confined principally to the second interspace, extending as far out as the right nipple-line.

On Jan. 15th of the present year, two needles, insulated with silk to about a third of an inch from their points, were inserted into the sac, one connected with the positive pole close to the sternum, just below the second rib on the right side, and the other with the negative pole two inches to the right in the same intercostal space. The needles were pushed into the sac rather more than an inch. The current used was that from a Tibbett's battery, commencing with five cells, and in a quarter of an hour increased up to twenty. The entire operation lasted forty-five minutes. Scarcely any pain was complained of excepting the moment during the insertion of the needles. No bleeding followed their withdrawal.

For several days there seemed to be no change in the sac, but on the seventh day after operation it was observed that the aneurism had become almost quite still where the negative needle had been—viz., in the second intercostal space about two inches to the right of the sternum; but beyond this point pulsation could be distinctly felt. There appeared to be thus a bridge of about half an inch in extent in a state of quiescence connecting the pulsating points beside the sternum and in the right nipple line, for no change had occurred in the sac where the positive needle had been. Unfortunately, in a few days, it was noticed that the site of the negative pole again pulsated; indeed, the whole sac had become as active as ever.

On Feb. 8th the operation was repeated. This time the needles used were insulated with gutta-percha. The points of insertion were the same as before, and the number of cells used the same. During the process it was noticed that the positive needle, the point of which could a few seconds before be easily rotated—i.e., made to describe a circle in the sac, with the skin as a centre,—had become suddenly fixed, and continued so for some minutes, but soon became movable again, giving the impression that a clot had formed round it and afterwards fallen off. The current was kept up for an hour, and, as before, no pain was complained of, and no bleeding followed.

After this second puncture the sac seemed to alter considerably, for whilst before the prominence was most marked in the second interspace, it now somewhat abated there, but increased extensively upwards, the pulsation becoming strong just below the clavicle.

For three weeks but little change occurred, until rather suddenly, on March 9th, the patient thought he observed a considerable improvement—to use his own words, "It almost stopped beating for a whole day"; but unfortunately the pulsation returned, and in a day or two was as strong as ever. Taking encouragement from the apparent temporary improvement, the needles were again inserted on March 18th; this time the positive was placed as before—i.e., in the second intercostal space beside the sternum,—and the negative between the first and second ribs about an inch to the right of the sternum. The needles, time, and number of cells were the same as before.

Soon after the third insertion the tumour became much more prominent, the pulsation increased considerably, the dyspnœa became more marked, and the head and neck exceedingly cyanotic; indeed the patient himself remarked that he had "become much worse since the needles were put in last."

Without detailing the diurnal changes in the case, it is only necessary to state that there was strong evidence of a rapid increase in size of the sac, which interfered with the expansion of the right lung and venous circulation of the

head and neck. The patient died about four weeks after the last operation.

Post-mortem.—On opening the thorax an enormous sac at once became apparent, adherent to the entire surface of the back of the sternum as far down as the fifth rib, situated mostly in the right thorax, and pushing the right lung completely to the back. The aneurism, which was exceedingly large, holding about two pints of water, and when opened could easily have been made to envelop the head of a full-grown child at birth, arose from the ascending portion of the arch, about an inch and a half above the valves, by a wide opening two inches in diameter, the upper limit of which was just below the origin of the innominate artery. The first and second ribs on the right side were partially absorbed, the first being detached from its cartilage, which protruded into the aneurism whilst the rib was pushed forwards by the sac. The aneurism contained a considerable quantity of loose clot, easily removed, covering a thick layer of firm clot, adherent to the front wall, especially in the region of the punctures; indeed, the bulging portion in the second interspace beside the sternum, above spoken of as the site of the greatest prominence and pulsation, was occupied by firm blood-clot, like that found in the so-called "cured" aneurism, thus accounting for the abatement in the pulsation and prominence in this region after the second puncture. On removing this clot two small pit-like depressions became apparent in the wall of the aneurism, being in this part the only positive evidence of puncture. Externally—i. e., at the site of the negative pole for the first and second operations—the sac was considerably thickened and tense, like cicatricial tissue, this altered portion of the wall being in the form of a firm band rather than a patch. In the region of the negative needle in the last operation, between the first and second ribs near the sternum, a prominent pouch existed, in the middle of which there was another firm band, the sac bulging out at each side, and being here exceedingly thin.

CASE 2.—S. C.——, aged forty-four, a patient of Dr. Wicks, with whom I saw him. In this case Dr. Wicks first made the diagnosis of aneurism of the thoracic aorta in October of last year, at which time there was no prominence of the chest wall, simply dulness to the left side of sternum, corresponding to the second rib, and marked dyspnœa, with a mitral systolic murmur. The case was treated with iodide of potassium and digitalis until December, when the dyspnœa for which he had sought advice was relieved. He then passed from Dr. Wicks's notice; but again applied to him in January, an interval of six weeks having elapsed, complaining of dyspnœa, with pain in the chest and hæmoptysis. A prominence almost as large as a hen's egg, with strong pulsation, was found to the left side of the sternum. The same treatment was continued, the quantity of the iodide being increased from fifteen to twenty grains, three times daily; and this time with marked success, for the prominence disappeared, and the pain, dyspnœa, and hæmoptysis relieved in the space of three weeks. At the end of this time the bulging returned, with profuse hæmoptysis and severe pain. I then saw the case for the first time, and found a pulsating tumour, the size of a small apple, presenting, as it were, through the sternum, to the left side, and between the first and second ribs. Percussion revealed a considerable area of dulness; there was no murmur, it had disappeared a few weeks previously; the left pulse at wrist barely to be felt, the right much stronger; the sphygmographic tracing of the pulses displayed a marked difference, the percussion stroke on the left side being scarcely worthy of the name. The iodide of potassium was continued for a few weeks; but on matters getting worse, it was decided to try electrolysis.

The needles used were similar to those employed in the previous case on the first occasion, the current was derived from fifteen cells of the Leclanché battery, and kept up for nearly an hour, during which time the patient complained of severe pain.

Next day there was a good deal of swelling with inflammation in the region of the aneurism, which had apparently, in the few hours which had intervened since the operation, increased considerably; the pain was almost unbearable. During the next two days there was but slight alteration in his condition, except that the sac rapidly enlarged; and on the fourth day after the operation the patient died suddenly with a very profuse hæmoptysis.

The post-mortem examination revealed a state of things which we certainly had not been led to expect—namely, the fact that the aneurism was not sacculated, as had been supposed, but was a very large globular one involving the roof and the sides of the arch of the aorta, commencing an inch above the valves. The top of the sternum and first rib were considerably corroded, forming a rounded hole through which the sac bulged; the protruding pouch seemed ready to give way, having exceedingly thin walls. A large clot almost half filled the sac, occupying the wall between the entrance of the aorta and the exit of the innominate artery, which was pervious and of normal calibre; the left subclavian was especially reduced in size, barely admitting a probe. The aneurism had opened into the anterior wall of the trachea, about an inch above the bifurcation, by a pin-hole orifice situated in the centre of a small ulcerated patch, evidently the site of the previous hæmoptysis.

Remarks.—The profession at large evidently deem galvano-puncture a plan of treatment only to be adopted when all other means have failed to arrest the onward progress of the aneurism; and, as it is generally recommended to give the less heroic plans a "fair chance" before resorting to the needles, it stands to reason that the sac will be, in most cases, pretty well advanced by the time it is thought judicious to use electrolysis. The question arises, what is to be expected from the treatment at such a time? It would surely be rash to hope to consolidate a very large aneurism when most probably the communication with the aorta is an extensive one. I refer, of course, to sacculated aneurisms, as obtained in the first case. For, even supposing it were possible to consolidate the contents of the sac, the patient is little better off than before, for we leave him with a large hard tumour pressing in a more active manner upon the vital surroundings than did the liquid contents of the sac. Certain it is that the patient J. P—— would have succumbed sooner had he possessed in his chest a solid tumour instead of a pulsating aneurism with fluid contents. That aneurisms of the thoracic aorta do become consolidated and consequently "cured" is the experience of every physician, a notable instance of which I brought before the notice of the class in the post-mortem room of the Newcastle Infirmary a few weeks ago—viz., in the thorax of a patient admitted the day before his death, complaining of dyspnœa and cough, a sacculated aneurism the size of a very large orange springing from the ascending portion of the arch was found completely solid with lamina of firm clot. But it is scarcely to be supposed that aneurisms much larger than that will become consolidated. As a rule the walls of very large aneurisms are thin, and where they are prominent through the chest wall probably very thin indeed. When such is the case there is a danger of rapid increase through "inflammatory softening" and loss of power of resistance, as occurred after the last operation in the first case, and in the second case to a remarkable degree.

From a perusal of the first case it will be seen, both from the clinical history and from the post-mortem appearances, that considerable benefit may be expected from electrolysis in suitable cases. First: When the sac does not become inflamed, and is not too thin, a secondary thickening may result. Second: The contents may become more or less consolidated, as happened in the pouch into which the positive needle had been inserted. But in order that these results may prove of any real benefit to the patient, it seems to me essential that the aneurism should not have advanced to a very great extent. In fact, if galvano-puncture is to be adopted at all, it should be tried earlier than it is generally employed, as it may undoubtedly in advanced cases accelerate the termination.

CASE OF PSEUDO-HYPERTROPHIC PARALYSIS.

By BYROM BRAMWELL, M.D.,

LATE PHYSICIAN AND PATHOLOGIST TO THE NEWCASTLE-ON-TYNE INFIRMARY; LATE LECTURER ON CLINICAL MEDICINE AND PATHOLOGY IN THE UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.

THE following are the brief notes of a case of this rare affection.

John W——, aged eleven, was admitted to the Newcastle-on-Tyne Infirmary under my care on Nov. 25th, 1876, complaining of inability to walk or stand.

Previous history.—He enjoyed good health until five years ago, when he began to complain of weakness in the back.

His father noticed about this time that he waddled in his walk, and frequently tumbled down. His walking gradually got worse. For the past year he has been confined to the house. He has been free from pain. His friends know no cause for the attack.

Family history.—No other members of the family are affected. He has two brothers, both younger than himself.

Present condition.—He is a dark-haired boy; his eyes are gray; his expression is dull and heavy. The pupils are equal and moderately dilated; the cornea are clear; the lateral incisors peg-shaped and somewhat irregular, the central incisors naturally formed. He is unable to stand or walk unless supported. When he attempts to stand the attitude is striking and characteristic: the feet are widely separated, the distance between the great toes being fifteen inches, and he stands entirely on his toes; the back is arched, the head somewhat retracted, the chest protruded; he tries to support himself with one hand on either hip.

When he walks—and to enable him to do so he has to be supported by a hand under each armpit—the body is swayed from side to side, the feet are only moved a few inches at each step, and the toes drag along the ground. The leg below the knee is flaccid and pendulous; the limb is carried forward by the flexors of the thigh on the abdomen. In walking the hands are kept extended, one on either side of him, and he makes great efforts, as shown by the expression of his face. When lying on his back he is unable to raise his heels from the bed. He can flex the thigh on the abdomen. He has the greatest difficulty in turning from his back on to his face; in order to do so he first flexes the thigh on the abdomen; he then with his hands pulls up his heels to the buttocks; he next turns round and gets on his knees; the head is now almost between his knees; from this position he gradually extends himself by climbing up his thighs.

His height is 4 ft. 2½ in. All the muscles of the body except the calves are much atrophied. The calves appear to be large; they are firm, and the left is larger than the right. The following are the actual measurements:—

	Inches.
Right calf three inches below head of fibula	10
Left " " " "	10½
Right thigh seven inches above patella	10¾
Left " " " "	11

It will be seen from the above that the left calf at its thickest part was only half an inch smaller than the left thigh at its thickest part, the normal ratio being as 2 to 3. The feet are always in a position of talipes equinus; the tendo Achillis feels rigid. The electrical contractility of all the muscles is diminished; this was very striking in the apparently hypertrophied muscles on the back of the legs.

The temperature of the calves is slightly elevated. To come to a correct conclusion on this point I made comparative observations on healthy boys, and never found the temperature of the calf equal to that in the axilla. The temperature was taken by an ordinary thermometer, which was fixed by a piece of adhesive plaster, the whole being covered with cotton wadding. The following is the exact measurement of the temperature:—

Right calf	98° F.
Left calf	98·8° F.
Axilla	98·5° F.

A microscopic examination of portions of tissue removed by Duchenne's trocar showed fibrin tissue, fat-cells, and fibres of a highly refractive translucent appearance. The fibres were rather larger in diameter than an ordinary muscular fibre. No transversely striated fibres were obtained, though the operation was repeated several times.

None of the other muscles were hypertrophied; on the contrary, as has been stated above, they were atrophied. Sensibility of all sorts was natural. The special senses were normal. The urine sometimes dribbled away from him; on two occasions he was unable to make water, and the catheter was required. The bowels were very costive. There was no mottling of the skin. The other organs were normal.

Treatment.—Iron, quinine, strichnine, cod-liver oil, and electricity (both forms of current) were tried, but without benefit.

The patient remained in hospital until the end of January, and was then taken home by his friends. At the time of his discharge he could not walk forwards even when supported. When held up by a hand in each axilla he attempted to walk, but was unable to move his feet forwards; he could raise them a few inches from the ground by raising the thigh, but the feet fell back again even further than before; in short, instead of going forwards, as he wished, he went backwards.

Remarks.—The case is a good example of the advanced stage of the disease. Dr. Gowers' admirable clinical lecture on the subject renders any remarks unnecessary.

Edinburgh.

THE TREATMENT OF EXCITEMENT BY SEDATIVES OR OTHERWISE.

BY J. A. CAMPBELL, M.D., F.R.S. EDIN.,
MEDICAL SUPERINTENDENT OF GARLAND'S ASYLUM, CARLISLE.

(Concluded from p. 152.)

I SHALL shortly deal with one or two specially caused or recognised forms of excitement, and then notice some modes of treatment which I have used.

Excitement of a delirious nature, the result of refusal of food or insufficient feeding. Several cases of this character came under observation, and where the patient could not be got to take food naturally it was at once administered with the pump. I lately described the practice at Garland's as to feeding,[1] so do not allude to it. One case which came under observation in 1878 more strongly than ever convinces me of the advisability of promptitude in feeding certain cases. M. H——, admitted in a deliriously excited state and very weak; mental aberration, probably primarily due to mammary abscess occurring while she was in a weak state from nursing. Had refused food almost entirely for four days. Was fed at once—twice the first day; and became quiet whenever the food and stimulants were absorbed. Fed next morning, and took food afterwards. She rapidly got well, and was discharged one month and thirteen days from the date of admission.

While speaking of feeding, I may mention that careful, frequently repeated feeding, in some cases with stimulants, during the day, and at night if awake, not only quietens, but I am sure prevents patients from not recovering. I attribute the infrequency with which one meets, in most asylums, cases of slight dementia—useful working patients, but wanting in energy to do for themselves and face the

[1] Feeding versus Fasting. Brit. Med. Journ., Feb. 22rd, 1878.

world outside—to the increased and increasing care that is used in the feeding of the acutely excited cases.

Excitement of puerperal mania. — Excitement was the prominent feature of the twenty-six patients admitted labouring under this disease. Of these, nineteen recovered; one was taken away when almost well; six are here still, two of them nearly well, and I do not despair of the recovery of the others. I find that I gave chloral at night to seven of these, six of whom recovered and one is here still. I treated three with sedatives during the day; one recovered, the other two are here.

Excitement of general paralysis. During the five years I admitted thirty-eight general paralytics, many of whom had attacks of excitement in the course of their disease. I have principally used tincture of hyoscyamus with this class of cases, as I do not think bromide of potassium, alone or in combination, so suitable for this form of excitement. At times, general paralytics get into such a deliriously excited state that injury to themselves or others would most certainly happen if they were not secluded. I base this assertion on careful observation and trial of cases, and I have noticed that when removed from, to them, exciting causes, they quieten. I believe that in certain brain states of general paralysis even light acts as an irritant. This remark about certain cases of general paralysis applies also to some cases of epilepsy.

Excitement of epilepsy.—It may seem almost a work of supererogation to touch on this subject, or to deal with the effects of bromide of potassium in allaying the irritability and reducing the number of fits. It has been written about by so many; but by none dealt with in such a systematic manner as by Dr. Clouston, in his paper entitled "Experiments to determine the precise Effects of Bromide of Potassium in Epilepsy."[2] Of the patients dealt with in this paper,[3] several have been removed, several have died, and some, for various reasons, have had to have the bromide stopped at intervals. I find, however, that six patients have been taking bromide of potassium in twenty-five-grain doses thrice daily since shortly after the date of Dr. Clouston's paper (1868). On taking a weekly average of their fits for the last month, and looking at the average number before he gave them bromide, and after, as in Table 2 of his paper, I find that with these cases not only is the four weeks' average less than before, but also, in four out of the six, less than after taking the medicine as recorded in this table, which I think tends to prove that this medicine does not lose its good influence by continued use in the treatment of this disease. In regard to my five years' practice, I need merely say that I gave bromide of potassium with marked good effect to the majority of cases of epilepsy that have been under my care; that I have a correct record of the fits occurring by day and night in the epileptics at Garland's; and that the value of this medicine as a preventive of the excitement of epilepsy can only be rightly estimated by those who have to do with excitable epileptics. Suiting the dose to the patient, and at intervals examining the patient, must be carefully attended to.

Prolonged exercise in the open air. — Some years ago Dr. Sibbald, now one of the Scotch Lunacy Commissioners, in the course of conversation on the subject we are considering, told me that in the acutely excited cases that came under his treatment he went in strongly for prolonged exercise in the open air, and with very good results; that it obviated the use of sedatives to a great extent, and that its effects were much greater in subduing excitement than one would suppose. During sea voyages, or when on my yearly leave of absence I have devoted myself to my favourite relaxation of fishing in the north, I have been much struck by the sleepiness which I experienced. I am naturally of a wakeful disposition; but when away and occupied in this manner, exposed to the strong air of the Atlantic, I have found it impossible to keep my eyes open whenever I sat down for any time, and I could with ease sleep from 9 P.M. till 9 A.M. The soporific effects of the open air are markedly observed in children; you see them wheeled past in perambulators fast asleep and half hanging out. For the last five years I have used open-air treatment very much, and each year more, till latterly, weather and patients' physical state permitting, I have kept the acutely excited cases out nearly all day and walked them about, letting them sit down at intervals; and I am of opinion that this is the best treatment for the patient's state, his future recovery, and for the comfort of the patients in the asylum.

Rest to one organ, or a portion of it, often means work to another. Some of the greatest statesmen and thinkers of both this and other countries find it at times useful and necessary for their health to give rest to their thinking brains, and do so by actively exercising their muscular system—certainly a more scientific mode of expending the excessive nervous energy than by damping it by repeated doses of sedatives. All who make great demands on their mental powers know and feel that at times the thinking portion of their brain gets too excited; it goes working out on its own account the matter under consideration, sometimes even in sleep. The head and ears feel hot; a sense of fulness is experienced in the head; the feet are cold; and, unless checked, the digestion gets out of order. Muscular exercise in the open air, however, soon enables the nervous centres to readjust their action. The excitement of acute mania, where no organic cause is present, is merely an aggravation or excess of the state I portray.

Though the breezes fresh from the Cumberland Fells are no doubt bracing, health-restoring, and sleep-producing, yet I certainly think our advantages for procuring good results from this most simple, natural, and efficacious mode of treating excitement are handicapped when we compare with asylums situate near the estuary of the Forth, the Moray Frith, the Aberdeen coast, or the shores of Lochfyne.

The morning shower-bath as an auxiliary in the treatment of excitement.—I made an analysis of the cases that came under my observation when assistant-physician at Garland's Asylum;[4] and after careful inquiry I found that this treatment was useful in hysterical mania in girls, in a somewhat similar state in boys and young men dependent on sexual causes, in cases of puerperal mania at the dull stage, and lastly in cases in which persistent excitement exists without organic cause. The analysis of the last five years' treatment by this agent shows its use in sixty-five cases—forty-two males and twenty-three females. Of the forty-two males, thirty-four were boys or young men in whom the excitement appeared due to sexual causes; eighteen recovered, and the others improved in bodily health. Eight were men labouring under persistent excitement of a chronic character; two recovered; the remainder were not much affected in any way by the treatment. Of the twenty-three females, twenty-one were girls or young women suffering from hysterical mania; twelve recovered, seven improved in bodily health. Two were in the dull stage which at times follows puerperal mania: one recovered; the other is still in the asylum, but improved. All these cases were considered, from their character, likely to be benefited by this treatment. The bath was used for half a minute, and only given between the end of May and September. Several of the patients who recovered told me that they were much benefited by it, and, as it is only used as a remedial agent in the asylum, it is not looked on with repugnance.

Blistering over the ovaries in cases where the excitement appears due to ovarian irritation, and where the mental phenomena are of a sexual character. This appears to me a reasonable form of treatment, and I adopted it in twelve cases of this nature; good results appeared in several cases to follow the application of the blister. Two cases recovered, and in four there was noticeable improvement in state and habits. I merely suggest that this treatment may be useful in such cases, and as I have opportunity I shall use it, and notice if it has any effect; but, as I have already mentioned, it is most difficult to estimate the value of remedies in insanity.

Asylum noise and asylum-made excitement.—The constructor may be the remote cause of much of the noise in an asylum both by night and by day, from having neglected efficiently to deafen the floors, or to place solid shutters in the single rooms. I know more than one asylum where shutters of thin wood stretch across the hollow of the window, and one noisy patient may arouse nearly all the excitable patients in the asylum at night, for imitativeness, irritability, and fright are all called into action. I had under my charge for some time a regimental drummer who mistook his shutter nightly for a drum, and exercised himself on it, and others by it. That acute cases should be liable to be so disturbed is not as it should be. Overcrowding is a common cause of asylum-made excitement, and it is difficult to deal with. Much attention is needed from the

[2] Journal of Mental Science, Oct. 1868.

[3] These experiments were made while Dr. Clouston was superintendent of the asylum.

[4] The Shower-bath in Insanity (Journal of Mental Science, Jan. 1873.)

attendants to promptly and judiciously separate the quarrelsomely inclined before a quarrel begins, and keep all they can employed. It shows an advance that "refractory wards" are things of the past in most asylums. A careful separation of the chronic excitable element through different wards, interspersing dements and melancholics, like

"Feather-bed 'twixt castle wall
And heavy brunt of cannon-ball,"

is certainly of great value; but elbow-room, or the want of it, often makes the difference between a quiet and orderly or a noisy and disorderly asylum. I think the excited new patients should be treated individually and separately from other patients when in the house. I believe they would get over the excitement more quickly. Had I sufficient room I should at any rate put it to the proof. The money value of a recovery is much greater than one would at a glance estimate, and especially in this asylum, where the death-rate has been always low, and the difference between the short or long residence of a recoverable patient would easily pay, and more, for an extra outlay during the first part of the treatment of an excited patient.

I append a brief summary of the foregoing:—

That in excitement sedative treatment during the day is at times necessary to render patients manageable. I, however, think that when used for any length of time, the patient remains somewhat longer in a stupid or mentally clouded state after the excitement passes off.

That in acutely excited patients, where exercise does not cause sleep at night, it is well to induce it artificially, so as to prevent injury to health from exhaustion; but this form of treatment should only be used for short periods.

That I have found chloral, given as described, a most certain sleep-producer, and harmless.

That with excitement and sleeplessness in chronic patients it is at times necessary for the quiet of an asylum to give sleep-producers, but the necessity may be much diminished by open-air exercise and employment.

That careful, frequently repeated feeding is as necessary in the treatment of acute excitement as in that of any other acute and exhausting disease; that its neglect may induce dementia.

That in the vast majority of cases of acute excitement prolonged exercise in the open air does away with the necessity for sedative treatment or the use of sleep-producers, and in a great measure obviates recourse to seclusion, but involves extra supervision and more attendants.

That, after a six years' use of bromide of potassium in epilepsy, I am in a position to corroborate the evidence of others as to its efficacy in the treatment of epilepsy, by reducing the number of fits and allaying the irritability almost always concomitant with epilepsy. The arranging the dose to suit the case, and at intervals examining the patient as in any other form of treatment, must not be overlooked.

That the morning shower-bath is an important auxiliary in the treatment of excitement in the young of both sexes.

That in some cases, where excitement appears due to ovarian irritation, blistering over the ovaries appears to do good, and that this subject is worthy of attention.

ACUTE RETROVERSION OF THE UTERUS, SIMULATING PREGNANCY.

BY G. GRANVILLE BANTOCK, M.D., F.R.C.S. ED.,
SURGEON TO THE SAMARITAN FREE HOSPITAL.

MRS. O——, aged thirty-three, was under my care during her first pregnancy. She suffered during the whole period from very distressing sickness and heartburn, for which the usual remedies, such as bismuth, soda, hydrocyanic acid, bromide of potassium, &c., were tried in vain. I delivered her (by forceps) at full time of a very large and well-nourished male child, in August, 1877. The sickness ceased with the delivery of the child, but the heartburn continued for a few days. She made a very good recovery, regained her usual health, and suckled her baby for the usual period.

Soon after weaning her baby, the menses reappeared, and recurred with regularity, though rather more abundantly than formerly. She menstruated from Oct. 8th to the 12th, 1878, as usual. On the 14th she carried a rather heavy child, five years and a half old, very hurriedly up two flights of stairs, but felt nothing more than what might be expected from such severe and unusual exertion. The next day she felt sick on getting up in the morning, and shortly afterwards the sickness assumed the same form as in her pregnancy of the preceding year. I saw her on the 16th, but for another object, and she omitted to say anything about the sickness. She then went to the seaside, and on her return I saw her again on Nov. 2nd. The sickness and heartburn had then assumed their old proportions, and I tried again some of the usual remedies. She had menstruated again at the usual period, but she thought there was a difference, inasmuch as for two or three days the flow ceased during the night, and returned in the morning after getting up.

Finding the medical treatment of no avail, I got her consent to try the effect of local treatment. And now the question arose as to the form—whether that of Dr. Copeman, or the application of nitrate of silver to the os and cervix, as practised by Dr. Jones, of Chicago, and highly recommended by Marion Sims. This recommendation by so distinguished a gynæcologist determined my choice, and on the 18th I proceeded to make the experiment. I introduced my fourth size of Neugebauer's speculum, and brought the os and cervix well into view. The latter was very much congested, while the os was patent, the mucous membrane turgid, and a considerable glairy discharge issued from it. I applied the fused nitrate, by means of my probe, to the circle of the os and a portion of the cervix. I had not previously made a digital examination. Up to this time of the day the sickness and heartburn had been very distressing. Next day she told me the effect was almost instantaneous, for, on getting up about an hour after the application she felt perfectly well, and had had no return of the sickness. For three days this immunity continued. I thought that at last a remedy had been found for one of the most obstinate and distressing conditions that fall within the province of the accoucheur or gynæcologist to treat, and I was much gratified with the result; but my rejoicing was destined to be of short duration, for next day my patient was slightly sick in the morning. But I was not wholly discouraged; for it was a consolation to remember that both Dr. Jones and Dr. Sims had had to apply the remedy several times before the cure was complete. For a day or two there was a slight hæmorrhagic discharge. On the 25th I repeated the application, very slightly, but with a less satisfactory result, as the period of immunity was shorter. Still I thought I ought to persevere, and again applied the nitrate on the 5th December. After these two applications there was no sanguineous discharge; but the effect was evidently less with each application.

My patient and myself were now quite disappointed. Again she menstruated after the usual interval; but the flow was of the same "dodging" character as on the last occasion. I now thought it necessary to institute a digital examination, and did so on Dec. 12th. I found the uterus retroverted, the os patulous, and body enlarged; but I could not satisfy myself, at this early period of the case, of the existence of pregnancy, or otherwise, as, of course, the use of the sound was inadmissible. I now thought that the vomiting, &c., might be kept up by the version, and accordingly introduced a Hodge's pessary, placing the patient for this purpose in the knee-shoulder position. In this manner I was able, by pressing on the cervix anteriorly, to rectify the position of the uterus. On placing the patient on her back, after the introduction of the pessary, I found that the cervix maintained its normal position. The result of this was that the sickness was much relieved, and soon afterwards entirely disappeared.

I now saw the patient only at distant intervals, and she appeared to be advancing in pregnancy. She was conscious of progressive increase in size, and felt convinced of her pregnancy. Nor did her friends fail to notice her condition. I told her at the last-mentioned date that the pessary would have to be worn for about three months. Meeting her about the middle of March, she told me she had removed the pessary, that she still continued regular, but that she was entirely free from sickness or heartburn. My suspicions were now aroused, though her appearance did not support this feeling, and I asked her to call upon me. She did so on April 1st, expressing the hope that I was not about to make an "April fool" of her. But the Fates had decreed otherwise, for although to the outward eye she

appeared pregnant, I found her uterus empty. It was still retroverted, though not so much as before; the os had contracted to a more normal size, and the body was decidedly less, the cavity measuring about 2½ inches. There was certainly no fœtus there, nor was there any question of extra-uterine fœtation. There was nothing to be felt in the abdomen, and the mammary areolæ confirmed the diagnosis. The impact of the sound on the fundus caused her some pain. The uterus was replaced by the sound; a Hodge's pessary of the material and form usually employed by me[1] was introduced, and ascertained to be efficient. On the 7th of April she told me that two days after her visit she was sick in the morning, that she had had sensations in her breast similar to the "draught," and that she had been able to squeeze a drop or two of milk out of the nipples, that she was as large as ever, and that her friends and several monthly nurses were convinced (!) the doctor was in error; one of, the latter, in her wisdom, after pointing to the peculiarities of shape, affirming that if ever she saw a pregnant woman my patient was one.

Mrs. O—— has now got rid of the distension, and no longer suffers from gastric disturbance. The uterus is in good position, the sound enters readily in the normal direction, and menstruation goes on regularly and well.

That this was a case of acute retroversion there can, I think, be no doubt. Up to the 14th of October this patient was, as far as she knew, perfectly well. She rushes up two flights of stairs with a heavy screaming child clinging round her neck, and within twenty-four hours begins to have sickness. What further evidence do we require to establish the relation of cause and effect? I confess I am satisfied. We know that the uterus is liable to sudden displacement in a variety of ways, such as slipping downstairs, falling on the buttocks, &c. I have now under treatment a young girl, aged fifteen years and a half, who appears to have suffered this accident from *falling on her face in a fit of sneezing*. She described the sensation "as if something had given way in the bottom of the back" in the region of the coccyx. At her next period—viz., on Feb. 7th or 11th—she had so much pain that she had to go to bed. This pain was felt "across the bowels," and she could not sit down without great discomfort, and the getting up, in which she had to assist herself with her arms, was even more painful. At the time of her visit the latter symptom was the chief one. Up to the time of the accident the periods, which had been regular from the commencement—viz., in July, 1877,—were painless, with the exception of the first. On that occasion, however, the pain was nothing to complain of. Her symptoms were at once and decidedly relieved by the introduction of a No. 4 Hodge's pessary.[2]

This is a very instructive case. When the patient came to me she referred all her symptoms to the coccyx. A careful examination of this part revealed nothing abnormal, and it was not till I found the retroversion that I was able to explain the symptoms.

The reflex symptoms due to disorders of the uterus, of whatever kind, are most various. One will come complaining of frequent headaches, another of so-called bilious attacks, another of pains in the breasts, another of symptoms referable to the rectum; though in the majority of cases attention will at once be directed to the pelvic organs. How important it is, then, to institute a careful vaginal examination when the symptoms cannot be otherwise explained.

We are told by the opponents and half-hearted supporters of the mechanical treatment of uterine deviations that we should first treat states of congestion, and more particularly inflammation, by rest, &c., and that in most cases these measures will suffice. I am not prepared to acquiesce in the first part of this proposition, and one of my objects in publishing this case is to establish the converse. Reminding my readers that the only form of backward displacement in which a vaginal pessary is of any value, as I have elsewhere shown,[3] is *retroversion*, I maintain that the mechanical treatment should be the first. Of course, acute inflammatory action is another thing, and no man in his senses would dream of interfering with the uterus in such a case, even with the sound. But we are also told that the replacement of the uterus by means of the sound—as, for instance, in a case of retroversion—is all that is necessary. I have repeatedly demonstrated the error involved in this statement, and that if the patient be placed on her back the uterus will be found in its old position within five minutes of the removal of the sound.

It is a fact much to be lamented that there is still so much objection to the only rational method of treating a most distressing class of affections. I am glad, however, to find that the opposition is gradually giving way. Not to quote too many examples of conversion, I take the most recent confession with which I am acquainted.

At the meeting of the Obstetrical Society of Edinburgh, in the discussion which followed the reading of a paper by the Edinburgh Professor of Midwifery—viz., on Jan. 22nd last—Dr. Angus Macdonald stated that "he started in life strongly disposed to disregard uterine displacements, and at any rate to avoid internal treatment of them. A patient of his who suffered very greatly and long from a troublesome retroflexion was the means of convincing him that he was bound to reconsider his position. This patient suffered for upwards of fifteen months from much back-ache, from dysuria, and other troublesome symptoms. She also ultimately became pregnant, and aborted at the third month. He tried pads applied to the perineum, with and without supra-pubic pads, but the effect was *nil*. He tried internal medication with equally imperfect success. At last he resolved to straighten the uterus and adapt a Hodge's pessary. This he did with complete relief to most of the symptoms. The patient fell pregnant in a few months; the instrument was removed about the end of the fourth month, and all went well. Since that time the same patient has been again twice delivered at term. She usually needs to wear the pessary during the periods between her pregnancies. This occurred at a comparatively early period of his practice, and the experience has more or less influenced his action ever since. Accordingly, when the uterus is mobile,[4] and not fixed in its position of retroversion or retroflexion by adhesion, and gives rise to troublesome symptoms, he considers it ought to be treated, and that it would usually give excellent results with a Hodge's pessary. Dr. Bantock maintains that retroflexion cannot be benefited in this way, but only retroversion. In this he thought he was mistaken, and that if the uterus is first straightened by the sound and a Hodge introduced which is not too much curved in its posterior limb, the retroflexion may be removed."

Now, I make this lengthy quotation from Dr. Macdonald's speech with much pleasure, and not the least because of his disagreement with me in one particular. It is a good sign when our lecturers on gynæcology, the men who have most influence on the future of a question of this kind, boldly come forward and declare their conversion. I have not the slightest doubt that further experience will convince him of the correctness of my views on the action of Hodge's pessary upon a *retroflexion* as distinguished from a *retroversion*. It would be well were a little more precision observed than is usual in speaking or writing of these affections. Men speak of these two conditions in the same breath, as if they were synonymous. Until they learn to distinguish accurately between the two confusion must prevail. Perhaps this arises from the fact that there are cases of retroversion proper, with a certain amount of flexion. But a case of this kind should not be called a "retroflexion." The version is the primary fault, and the flexion the secondary, due to the varying intensities of pressure, first in the form of downward pressure on the body of the uterus, and, second, in the form of resistance to the displacement of the cervix in the vagina. These two opposing forces produce a certain amount of flexion in a retroverted uterus, but the displacement is essentially a *retroversion*, and is to be remedied by Hodge's pessary. This is a matter on which I cannot insist too strongly, for on a right appreciation of these facts the whole question turns. Dr. Macdonald thinks I am mistaken, but I venture to believe that before ten years have passed Dr. Macdonald will be heard, on the same floor and with the same courage, announcing his complete conversion.

The paragraph of the paper which elicited the preceding confession is headed "The Retroflexion of the Uterus." In this the author evidently includes both forms of backward displacement, and it is with this want of precision that I find fault. But this does not prevent me from quoting

[1] See my paper on "The Use and Abuse of Pessaries."

[2] These pessaries, which are made for me by Krohne and Sesemann, are numbered for the convenience of practitioners residing in the country or at a distance.

[3] On the Use and Abuse of Pessaries. See also Braxton Hicks.

[4] It ought to be needless to remark that if the uterus be not mobile a vaginal pessary is wholly inadmissible.

with great pleasure these weighty words of Professor Simpson: "I do so (viz. invite attention to "the backward displacements of the uterus") all the more urgently that the subject of uterine dislocations is one which a certain group of respectable gynæcologists pride themselves in slighting, or even trying to teach the profession to ignore. Reviewers may load the pages of our journals till they are ready to sink under the length if not the weight of their strictures on physicians who recognise the existence of these mechanical disorders and remedy them by mechanical means; but the man who has seen one such case as this which we are considering will be apt to suspect that these review-writers are more skilful in handling the critic's pen than the practitioner's probe. I have seen many such cases."[5] So have I.

Granville-place, Portman-square.

CHRONIC STARVATION AND FATTY DEGENERATION AS CAUSE AND EFFECT:

A CASE OF FATTY DEGENERATION; WITH REMARKS.

By JOHN C. LUCAS, F.R.C.S., &c.

THAT fatty metamorphosis not unfrequently occurs without the previous advent of chronic tuberculosis there can be little doubt, and that this is the effect—although a remote one—of depraved nutrition, extending over a more or less lengthened period, during which the food taken into the system has been much below par, must also be *à coup sûr* to most average observers.[1] It is true that fatty changes (conversion into fat of muscular, nerve, osseous, and other tissues, including the complex placental structure) do take place *pari passu*, but as the result of the reverse cause—over-feeding, perhaps in most cases combined with inadequate bodily activity. And, again, thirdly, some (like Moorhead, p. 254 *et seq.*, vol. i.) even believe that the poison called malaria causes atrophy, with fatty degeneration and infiltration. But this latter mode of causation, although quite true *per se*, I may here venture to explain in a different way, as follows: A person suffering from malarial cachexy can, in the first place, take in very little nourishment, owing, obviously, to the impaired appetite. Then, as Dr. MacDowall and myself endeavoured to show elsewhere, there are the effects of malarial influence on hepatic and splenic functions, and consequent spanæmia and general debility. "Admitting that inflammation of the liver not unfrequently results from vicissitudes of temperature, and consequent chills,[2] excessive heat, alcohol, dysentery, embolism, and traumatic cases, including cerebral injuries ("wunden des Schädels," Niemeyer); yet we cannot help believing that by far the most potent cause in India is malarial influence, and its cachexy, which soon develops itself. There is a spanæmic condition of the system thus produced, by which a greater onus is thrown on the spleen, and this organ soon enlarges and aggravates the spanæmia; in other words, the spanæmia is both the *vera causa* and effect of the splenic enlargement. There is an excess of colourless corpuscles found and formed in this organ; these are carried to the liver, and the collection and migration there of such an abnormal quantity of white cells or leucocytes (there being also a greater determination of blood to the liver), invite suppuration, which does occur. On the other hand, it may be logically inferred that—as simply an enormous increase of colourless cells in leucocythæmia, chlorosis, &c., never causes abscess of the liver or spleen—some other grave imperfection in their elaboration must take place everywhere, but especially in the liver, where Bernard, Lehmann, and M'Donnell ascertained that the white discs of the blood of the hepatic vein are five times more numerous than in that of the portal vein. Besides, enlargement of the spleen in this case is not always observed. We therefore hold that the faulty elaboration of the white cells, especially in the liver (for abscess of the spleen is not always concurrent), is the true cause of malarious liver abscess. The crowding of leucocytes from the spleen largely promotes the mischief; in fact, to this we may ascribe the sole origin, since, even with an inferior microscope, the amœboid movements of these white cells were unmistakably seen, thus corroborating the fact originally inculcated by Professor Cohnheim."

Then, again, in the case of women,[3] there is actual menorrhagia, if not leucorrhœa—additional channels of bodily waste, which in the existing state of morbid physiology cannot be made good. Again, there is also proportionately increased waste and combustion of albuminoid tissues from the periodical pyrexia. We have, therefore, from the causes noticed above, poor nutrition of the body, which appears to me to be *ipso facto* the *vera causa* of the fatty degeneration.

This explanation of the etiology of fatty transformation, and more particularly of the normal muscular structure of the heart, I think is illustrated in a paper published by me in THE LANCET.[4] Since then another case came under my observation, and proved fatal. Now, in this more particularly the fatty changes in the viscera, seen in the dead-house, are capable of explanation, and both according to Dr. Moorhead's and this other view of mine.

The case upon which I would make a few brief remarks was also that of a native soldier, a Hindoo, aged thirty-three years, and of fifteen years' service. Immediately before he came under my care he had been quartered at a notoriously unhealthy station, where he had repeatedly been under treatment for ague. On the 17th of February he was admitted into hospital. He was then very anæmic, and the body was badly nourished; muscles wasted and flabby; spleen enlarged; the liver, on palpation and percussion, did not seem very large (although in reality it was enlarged); his pulse was small and quick, but compressible; the heart's sounds were feeble (I could not tell that the organ was fatty), but regular. I had not percussed, unfortunately, to make out the area of cardiac dulness. The patient had never complained of angina pectoris, nor even of any pain or uneasiness in or about the chest to arouse the slightest suspicion. In fact, he was admitted as an ordinary case of fever. On the evening of the 18th (day after his admission) his axillary temperature was 106° F., followed by a morning fall to 97°, then an evening rise to 103·2° F., falling in the morning to 97·6°; evening of same day, 105°. On the 22nd the morning temperature was 100°, evening 103°. From this time the pyrexia assumed a continued aspect, with the same morning remissions and evening exacerbations (viz., 100° and 103° respectively), until the 25th; then, on the morning of the 26th, his temperature was registered 100·8°, and was followed by an evening rise to 103°. Death took place suddenly on this evening at about eight o'clock. The patient was seen conversing with his wife, who had visited the hospital to see him.

At about 9 A.M. next morning I examined the body, which certainly was very emaciated. The pericardium was all over adherent, and contained about two ounces of clear serum. The heart was large, of a leaden hue, with yellow patches in places; near the apex, and over the anterior surface generally, there was a fatty transformation, visible to the naked eye. The organ was of a soft and yielding consistence, and weighed 7½ oz., or about 3½ oz. below the average normal weight. The right auricle and ventricle were filled with hard discoloured clots; both these cavities were distended, and the former in some parts appeared thinned, not unlike an oily piece of paper, and almost transparent. These changes were much less marked on the left side; the valves were competent. At the mouth of the ascending aorta, outside the valve, there was a tolerably firm fibrinous clot. Lungs: right, 3 lb. and 6½ oz. in weight, consolidated throughout, but no tubercles or vomicæ; left, 1 lb. and 4 oz. in weight, œdematous, also free from tubercular deposits and cavities. Spleen enlarged slightly,

[5] Ed. Med. Journal, March 1879, p. 776.

[1] See for proof "Manual of Pathological Histology," by Dr. E. Rindfleisch (English Translation from German), p. 29, vol. i. And for contrary view, that this is not accomplished, see "Der Stoffumsatz bei der Phosphorvergiftung." Von Dr. Jos. Bauer, Zeitschrift für Biologie, Band vii., S. 93–96.

[2] I do not in the least imply that I countenance the "chill theory" (which can be disproved from the very data furnished ably by the author, who seemingly discards all the more weighty evidence opposed to his view). See for details "What is malaria? and why is it most intense in hot climates?" by C. F. Oldham, M.R.C.P.E.

[3] Indian Medical Gazette, 1876, vol. xi., p. 297. Professor Wharton Jones, F.R.C.S., F.R.S., denies the penetration of white cells through capillary walls (Brit. and For. Med.-Chir. Rev., 1852, vol. ii., p. 156); and since then he has not altered his views (vide THE LANCET, 1879, vol. i., p. 74.)

[4] Fatty Degeneration of the Heart (THE LANCET, 1878, vol. ii., p. 917).

[5] This is about the average temperature of a native in health.

and 11 oz. in weight; not congested. Liver enlarged, congested, and fatty, weighing 3 lb. and 4½ oz., or about normal; small pieces floated on the surface of water. Kidneys both congested; the right weighed 5 oz., and the left 5½ oz. The stomach, bowels, and the head were not examined.

Remarks.—With regard to the pericarditis it may be observed that the man during the past ten years was never under treatment for rheumatism, nor did he during his fatal illness complain of symptoms of pericarditis, which in this case was no doubt of a chronic nature. The next point of pathological interest is the cause of death by syncope, and which was revealed at the autopsy—namely, a very fatty condition of the heart. The pneumonia, I believe, was set up, and which, although caused by the fatty heart, in its turn embarrassed that organ in its feeble action. It may also be remarked that in this case salicin had little or no effect in reducing the temperature.

Agar, India.

SEVERE WOUND OF ABDOMEN, WITH PROTRUSION OF THE BLADDER AND INTESTINES; RECOVERY.

BY RIDLEY DALE, L.R.C.P. ED., M.R.C.S.E., &C.

ON Saturday, April 4th, 1879, I was hurriedly summoned to attend Mrs. P——, aged sixty-five. It appeared that she had been standing on a broken chair, the back of which was off, leaving two sharp uprights. Her foot had slipped, and in falling one of the uprights had entered her abdomen.

On examining the patient, I found a large contused and lacerated gaping wound, twelve inches long, extending from half an inch internal to the left superior iliac spine to within two inches of the right superior iliac spine, laying open the cavity of the belly along its whole extent. The wound was semilunar in shape, the lowest part of the crescent being two inches above the pubes. A large mass, the size of an adult's head, protruded from the wound, hanging down in front of the pubes. This consisted of the bladder, a portion of the small intestines, and the omentum; and on careful examination no wound either of the vesical or gut could be detected. The protruding organs were returned with some little difficulty, and the wound closed by carbolised silk sutures, merely embracing the skin and subcutaneous tissues, placed at intervals of three quarters of an inch, and a pad of dry lint and a bandage applied, the limbs being retained in a flexed position by means of a pillow. A mixture, containing opium, ether, and aromatic spirit of ammonia, was ordered to be taken every four hours, ice to be sucked frequently, and her diet to consist of brandy and milk. The patient was somewhat collapsed, but perfectly conscious; pulse weak, but regular; little or no hæmorrhage.

At 7.30, two hours after the accident, she had recovered from the effects of the primary shock, her pulse being regular and strong. Had passed urine easily, and without pain, and expressed herself as feeling very comfortable. Temperature 99° F. At 12 o'clock the bandages were slightly stained with blood, but the patient's voice was perfectly strong, her pulse was good, and she had taken her iced milk and brandy easily. No vomiting.

April 5th.—On visiting my patient to-day I found her smoking a pipe. Slight pain in the wound; no vomiting. Has passed urine three or four times perfectly free from blood. Takes nourishment freely. Temperature and pulse normal.

7th.—To-day there is more pain in the region of the wound. Pulse 100; temperature 101°. Tongue dry and furred. Has had some retching. To take a calomel and opium pill every four hours, and five grains of compound soap pill at bedtime.

8th.—This morning the patient has vomited her brandy. Complains of tenderness in the wound. Temperature 100°; pulse 92. On removing the dressings the deep parts of the wound were found to have united, but the skin and superficial parts were exuding healthy pus. A bright-red blush encircles the wound, fading gradually away about three inches from the margin. Sutures removed, except one in the centre and one on either side; dressed with dry lint. To discontinue brandy.

9th.—There is still some tenderness at the seat of the wound, but the reddish blush is disappearing. Dressings stained with pus, which is quite sweet. No further vomiting. Temperature 99·8°; pulse 96. Bowels moved once during the night.

10th.—Patient has passed a restless night; her bowels having been relaxed five times. Wound dressed; edges are sloughing to the left of the middle line and suppurating freely; dressing smells fetid. Abdomen not tender. The remaining sutures removed. Temperature 99·8°; pulse 88. To discontinue calomel and opium pills. Linseed poultices to be applied to wound.

11th.—Patient has passed a much better night; but wound is still painful. Temperature 100·2°; pulse 88.

12th.—Wound dressed; skin sloughing along whole extent of margin of wound; tongue very furred. Temperature 99·8°; pulse 84.

13th.—Patient is much brighter and expresses herself hopefully. Wound discharging freely and commencing to granulate. Temperature 99·8°; pulse 88. To take beef-tea and a saline mixture, and discontinue compound soap pill.

16th—Wound healing rapidly at the right extremity. Temperature 99°; pulse 84. To discontinue poultices and use a lotion of sulphate of copper.

From this date she progressed rapidly without an untoward symptom, and on May 8th the wound was perfectly cicatrised, and she was convalescent and able to get about.

Remarks.—Proof is hardly needed in the present day, when ovariotomy is so frequently performed successfully, that our ancestors' dread of an injury to the peritoneum was considerably greater than facts warrant. In the present case the abdomen was torn completely across in its transverse diameter, and the peritoneal cavity exposed for that extent. Yet, when we consider the age of the patient, the absence of all antiseptic applications, which were not at hand, and the contused state of the wound, the result must certainly be pronounced most successful; the patient being perfectly well in little over a month, with scarcely a bad symptom.

Sunderland.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

SARCOMA OF BREAST; HÆMORRHAGE; RECOVERY.

(Under the care of Mr. ANDREW CLARK.)

J. B——, a woman aged fifty-eight, was admitted March 20th, on account of a large tumour involving the left breast. It first appeared nine months previously as a small painless enlargement, and the patient neither sought any advice nor adopted any treatment. Soon after last Christmas it began to increase rapidly in size, and continued to do so till the beginning of March, when, being considerably larger than at present (according to the patient's statement), it burst, and discharged a large quantity of sanious fluid, which has continued ever since, varying in quantity from day to day. Being now inconvenienced by the weight of the tumour, and the pain in it being considerable, she was induced to apply for relief.

On admission, the tumour extended laterally from the middle line of the body to the axilla, and vertically from two inches below the clavicle to three inches above the lower border of the ribs; its circumference was 24½ inches; and its size laterally 17 inches, vertically 13 inches. It looked about the size of an adult's head. The breast itself was situated on the outer aspect of the growth; and just round the nipple, which was nearly in the axilla, there was normal breast tissue; the remainder was nodulated and irregular, varying in consistence—hard in some parts, soft and fluctuating in others; and in the upper part was a sinus, from which more or less sanious fluid was constantly exuding. It was freely movable on the subjacent structures, but the skin

was adherent to it in many places, particularly at the upper part. The lymphatic glands in the left axilla were slightly enlarged. The general condition of the patient was fairly satisfactory: she had never been laid up before, except with attacks of rheumatism; and there was no family history bearing in any way on the case. The diagnosis was cystic sarcoma; and the treatment resolved upon was excision of the breast and growth.

After admission the discharge appeared to increase, and on the 24th there were several gushes of arterial blood, which stopped readily on pressure. In the evening, however, there was such copious hæmorrhage that Mr. Clark was sent for at 11 P.M., and finding the patient apparently sinking, and the bleeding still continuing, he resolved to perform the operation without delay. She was then wandering; in a profuse perspiration; breathing 38 to the minute; pulse 120; temperature 102°.

She was put under chloroform, and the incisions were made in such a manner as to save all the healthy skin. No difficulty was experienced in removing the tumour; no large vessel bled, but numerous small arteries in the pectoral muscle, some of which were controlled by ligature, gave considerable trouble. The wound was washed with chloride of zinc solution, the sutures put in, but not drawn tight, and a piece of lint dipped in carbolic acid lotion put inside the wound, and firm pressure applied. This effectually stopped the bleeding. Forty drops of sedative solution of opium were administered.

March 25th.—Patient had a good night, was quite herself again, and surprised to find the tumour gone, having had no idea of what had taken place. The dressing was removed, the wound closed by drawing up the sutures, and a piece of lint dipped in carbolic acid lotion applied.

To complete the case shortly: By the 27th, suppuration was freely established, and the general condition of the patient had decidedly improved. By the 30th all the ligatures had come away and the sutures had been removed, and a lotion of sulphate of zinc (two grains to an ounce) was substituted for the carbolic acid, which had been continued up to this time. By the middle of April only a healthy ulcer was left, and the enlargement of the axillary glands had disappeared. The recovery was somewhat retarded by several attacks of rheumatism, which prevented patient leaving the hospital till May 7th.

The tumour, after removal, weighed 7lb. 12½oz., was solid except at its upper part, where were several large cysts, and the microscope showed it to be a spindle and round celled sarcoma.

Remarks by Mr. CLARK.—The case seemed to me worth recording on account of the large size of the tumour and the extreme rapidity with which it had attained such dimensions (three months). I would also refer to the fact of the operation having been performed during a febrile attack with such marked relief to the patient and to the rapid cicatrisation of so large a wound. The antiseptic method was not adopted, but there was never any decomposition of pus or any offensive discharge from the wound. Great care was taken to keep it clean, and when there was much discharge it was dressed several times during the twenty-four hours.

MONSALL FEVER HOSPITAL, MANCHESTER.

CASE OF CEREBRAL ABSCESS, WITH UNUSUAL IRREGULAR TEMPERATURE.

(Under the care of Dr. HENRY TOMKINS.)

THE following case, like that recorded from the Hôpital Tenon, Paris, is interesting from the fact that the symptoms during life were of an anomalous character, and indicated but uncertainly the presence of intracranial disease. Although the kind and degree of connexion between the suppuration within the skull and the disease of the middle and internal ear may be open to question, it is probable that the former was secondary to the latter. It may here be mentioned that in a recent work on "Deafness &c." Dr. Woakes alleges that the dura mater of the brain is, in the infant, directly continuous with the muco-periosteal lining of the cavity of the tympanum through the portio-squamosal fissure, and that in adult life the vascular connexion remains though the fissure itself becomes more or less obliterated.

Thomas C——, aged twenty-three years, a fairly healthy, well-developed man, a labourer, born in India, where he lived for eleven years, never having "fever" there, was admitted on Jan. 30th as a case of typhoid fever. He gave the following history. He had followed his work and enjoyed usual health until the 25th, when on rising in the morning he had severe headache, and the next day was compelled to lie in bed with a general feeling of malaise and sick headache. On the 27th he shivered and vomited a little, but had had no purging nor epistaxis.

On admission he lay in a quiet listless condition, but without the ordinary typhoid expression. He was perfectly clear in his mind, and at once roused himself to answer questions. There was no prostration. He complained of feeling "poorly all over"; no local pain. Temperature on evening of admission 105·4°; next morning, however, it had fallen to 101°. Pulse 86, normal in character. Lungs and urine normal. Bowels open once; stools semi-solid, clay-coloured. Tongue moist, whitish. No eruption. No enlargement or tenderness of liver or spleen. Very slight jaundice, with a little bilious vomiting. Complained only of languor with some headache and pain over epigastrium. Evening temperature 102°.

On Feb. 1st, at 8.30 P.M., he had a severe rigor, followed by profuse sweating, and the temperature was found to be 106·2°, which at 11 A.M. had fallen to 103° and at 2 P.M. to 98°. Jaundice had gone and vomiting stopped. He took his food very well. At 8 P.M. he had another rigor, less severe than the former, followed by sweating. Temperatore 101·4°, rising at 9 P.M. to 104·2°. Stools solid, clay-colonred. Tongue moist. General condition unchanged.

On the 2nd, at 2 A.M., the temperature had fallen to 101·4°; and at 8 A.M. was 102·8°. He slept well and quietly throughout the night. The temperature slowly sank through the day, so that at 8 P.M. it was 100·4°, when another rigor came on, and at 11 P.M. it had risen to 105°.

On the 3rd, at 2 A.M. the temperature was 100·4°; at 5 A.M. 100·6°. At 8 A.M. he had another rigor, and the temperature was 103·8°; at 2 P.M. it had fallen to 102°. Up to this time the patient's general condition had remained unchanged; his mind was perfectly clear, although he was rather heavy and inclined to lie quiet. He had little headache. There was chilliness at the time when the rigors came on. He ate his food; there was not much thirst; stools solid, colourless; urine normal.

The case at this stage was looked upon as a sort of irregular remittent fever, and four grains of quinine were given every two hours. At 6 P.M. he had a rigor; temperature 104·8°, followed as before by sweating and rapid lowering of temperature, so that at 8 P.M. it was only 101°, and continued tolerably steady at this point through the night.

On the 4th, at 8 A.M. the temperature was 100·5°, falling steadily through the day about half a degree each hour, so that at 4 P.M. it was as low as 95·6° (four grains of quinine being still given every two hours). At 8 P.M. he had a slight rigor, and the temperature, which at 6 P.M. was 96·6°, rose to 102·4°, and at 10 P.M. was 103·6°, making a total rise of seven degrees in six hours. It sank through the night, and at 8 P.M. on the 5th was 99°, and at 10 A.M. 97°.

Omitting a description of the slight daily variation in the main symptoms, it may be said that the chief features were a rather heavy, listless condition, without delirium, prostration, or excessive thirst. The appetite was good; bowels costive, stools pale clay-coloured, similar to those seen in jaundice. Headache was not very severe, but was accompanied with tendency to vomit. The temperature was strangely irregular; this, indeed, was the most marked feature in the whole case, rising and falling six or seven degrees within a few hours, sometimes with, but often without, any distinct rigor or other apparent constitutional disturbance.

The following table shows the variations during every two hours on the 5th, 6th, 7th, and 8th February:—

	Feb. 5th.	Feb. 6th.	Feb. 7th.	Feb. 8th.
2 A.M.	100·4°	99·4°	100°	98·8°
4 ,,	100	99·4	99·2	102·4 Rigor.
6 ,,	99·2	103·6 Rigor.	98·4	103
8 ,,	99	100·2	98·4	103
10 ,,	97	98·4	98·8	98·8
12 ,,	99·2	97·6	102·4	99
2 P.M.	102·4	97·2	104	98
4 ,,	103·6	98·2	101·4	101·4
6 ,,	101·2	98·4	98·8	101·8
8 ,,	99·2	102·4	98·6	101
10 ,,	99	103·8	98·4	99·4
12 ,,	100·2	100·2	98·8	100

During the whole of this time quinine had been given—four grains every two hours whilst the temperature was falling, and eight grains whilst rising,—but without any apparent decided effect. On the 10th the quinine was discontinued, as the man complained much of his head, and of deafness and tinnitus aurium, and salicylate of soda was given in its stead, in twenty-grain doses every two hours for the first twenty-four hours, and ten-grain doses afterwards. During the 10th, 11th, and 12th of February the temperature, though fluctuating, never rose higher than 101° nor fell below 98·4°. The headache was much better, but the deafness continued. On the 13th the temperature rose to 104·8°, falling below normal during the night, and as neither the quinine nor salicylate appeared to influence these irregular rises, all medicine was discontinued.

On the 14th he complained of pain down the right side of the neck, deep-seated more than superficial, with some little swelling beneath the right ear, and on the following day profuse fetid otorrhœa commenced, with relief to the pain. He was quite deaf on the affected side, but could hear perfectly with the left ear. The auditory meatus was washed out with warm dilute carbolic lotion, and the temperature during this and the four following days remained steady at about 99°. He begged to get up, as he was tired of bed, and was allowed to do so for a couple of hours on each of these days. There was no prostration, his appetite was very fair, and the headache was almost gone. The stools were no longer clay-coloured, but had regained their natural colour. Urine, pulse, and tongue normal.

On being questioned about the discharge from his ear, he thought he had once before had a discharge when he was a child, but nothing of the sort for the past twelve years.

On the 19th, and following days, the pain in the head returned, and now for the first time the man localised it as being worst over the right parietal region. The otorrhœa continued, and the temperature again rose and fell as it had previously done. Thus, on the 22nd, at 8 A.M., it was 98·2°; a slight rigor came on soon after, and in two hours, at 10 A.M., it had risen to 106·2°, rapidly falling after reaching this point. The discharge from the ear had decreased in quantity, and on examination with a speculum the tympanic membrane appeared to be destroyed, no trace of it being apparent.

During the 22nd, 23rd, and 24th, the temperature never rose above 101°, and on the latter date the otorrhœa had ceased.

On the 25th, 26th, and 27th, the temperature again rose each day to 106°, the maximum height being immediately followed by a decline. The pain in the head had now become intense, and but little doubt was felt that some intra-cranial inflammation was going on; and twenty grains of bromide of potassium were given, with morphia at night, to procure sleep.

On the 28th a marked change was apparent; the patient lay in a heavy somnolent condition, taking no notice of anything around him, and was with difficulty roused to a state of conscious intelligence. He took the food and drink given him, but never asked for anything. The pupils were dilated, but sight was not affected; sensation on the right side of the face and on the left side of the body appeared impaired. Temperature continued steady between 103° and 105°. The bromide was stopped.

On March 1st the above condition had become more marked. He lay in a state of semi-coma, with marked right facial paralysis and left hemiplegia, with almost complete loss of sensation in the same parts, the right arm being somewhat rigid. Temperature remained about the same. Next day he was much the same, except that he appeared blind in the left eye, but flinched when a light was brought near the right one. He passed fæces and urine involuntarily, both being normal in character. He lay in the same unconscious state until 11 P.M. on the 4th, when he died; the temperature, which during the last three days had on an average stood at 104°, rose at death to 106·5°.

Necropsy.—On removing the skull-cap and cutting through the dura-mater a large quantity of pus gushed out on the right side. The brain being removed, there was seen to be a large abscess situate in the cavity of the arachnoid, the pus extending over the greater part of the surface of the upper and right side of the cerebrum. A deep depression had been caused by its pressure on the ascending frontal and ascending parietal convolutions, where it extended across the sulci in the form of a lowly organised membrane; but owing to the way in which the pus had spread backwards and forwards from this spot it was difficult to fix any definite boundary to it. It nowhere dropped into the sulci, nor did it descend at all into the base of the skull. The brain substance cut firmly; the puncta vasculosa were rather enlarged and prominent. On examining the bones (the dura-mater having been stripped off) no disease could be detected in the temporal or other bones at the base of the skull. The temporal bone of the right side was removed, and there was then seen on the under and inner extremity of the petrous portion extensively diseased, softened, and inflamed bone extending about an inch outwards. Sections were made through the internal ear, and the membrana tympani and ossicles were found destroyed, and the fenestra ovalis perforated. The thoracic and abdominal viscera were healthy.

Remarks.—Some of the points worthy of note in the above case are the vagueness of and difficulty in interpreting aright the early symptoms; the remarkably fluctuating temperature, simulating to a great extent that seen in remittent fever; the apparent want of connexion between the abscess on the surface of the brain and the disease in the temporal bone, for after careful examination of the parts no communication could be found by which any of the discharge from the ear could have been derived from the abscess; and, lastly, the probability that if the seat of the abscess could have been satisfactorily localised the case might have been benefited by trephining.

HÔPITAL TENON, PARIS.

CEREBRAL ABSCESS; DEATH; NECROPSY.

(Under the care of Dr. D'HEILLY.)

THE following case is interesting owing to the error of diagnosis that was made, the symptoms having been attributed during life to lead-poisoning, whilst the necropsy showed that they were caused by a purulent collection which had formed in the left sphenoidal lobe.

Eugénie T——, aged twenty-eight, was employed in a printing-office, and had been thus exposed to the risks of lead-poisoning for some years, but had never given any signs of the poison, such as colics, paralysis, or articular disorders. She had menstruated at the age of fourteen, and her courses had always been regular. With the exception of an attack of acute articular rheumatism, which occurred four years before the present illness, she had been in fair health. She presented signs of scrofula. The patient had become excessively anæmic, and her complexion was of a yellowish-white hue, and this had become more and more marked since she had taken to her late employment. Her digestion had become defective, being accompanied by flatulence. She had lost her appetite, and was constipated. At the same time she suffered considerably from palpitations, and lost her breath after the slightest exertion, or from emotional causes. Auscultation revealed the presence of a systolic souffle at the base of the heart. In the vessels of the neck a very strong double souffle was to be heard. She often had vertigo and dizziness, and a few days before entering the hospital she was seized with these symptoms in the street and fell. She became unconscious. The left side of her cheek and head were bruised by the fall, and she received a large wound near the orbit on the same side. She remained in a state of unconsciousness for several hours, and when she recovered she complained of great weakness in her legs and pain in her head. After her fall the weakness in her legs went on increasing, and she had frontal headache, most marked on the left side. The headache was always present, but at times it became almost unbearable. She was unable to sleep on account of this pain. Constipation continued. There was no sign of fever; the skin was not hot. The face presented great pallor, and the pupils were normal. She had nausea, but did not vomit. Whenever she attempted to sit up in bed she became dizzy, and was obliged to lie down again. Urine normal. The lungs were healthy.

On the 6th March, two days after admission, she subsided into a heavy sleep, out of which she only woke to complain of the pain in the head. She became slightly agitated, and was delirious at night. There was no paralysis of any of the limbs, nor was sensation at all affected. She had been treated up to this time by emetics and opiates. Purgatives were prescribed, and ice was applied to the head.

On the 7th she was agitated, and had noisy delirium with slight remissions, followed by profound coma. There was

no fever. The pupils were normal. No paralysis, nor any disorder of sensation.

On the 8th the coma became more pronounced, the breathing was stertorous, the face was red, the skin hot and covered with moisture. The temperature rose to 41·4° C. During the course of the evening she died.

Necropsy twenty-four hours after death.—The lungs, pleura, and heart were healthy; spleen slightly congested; liver hard and difficult to cut; kidneys slightly congested. A quantity of serous fluid was found under the membranes of the brain; the pia-mater presented a great number of dilated vessels, and the cerebral tissues appeared very red; the convolutions were flattened down and pressed one against another. In the left hemisphere the sphenoidal lobe presented a swelling on its external surface; this swelling was about the size of a hen's egg, and was soft and fluctuating; when opened, a thick greenish liquid escaped from the interior of the mass; a granulating membrane was distinctly seen surrounding the collection; the layer of tissue forming the outside wall of this cavity was extremely thin. The ventricular cavities were normal, as was also the remainder of the nervous tissue. The analysis of the cerebral substance showed it to contain twenty centigrammes of lead.

The diagnosis which was made during life was therefore mistaken, and it is probable that death was due to the collection in the sphenoidal lobe. The diffuseness of the symptoms and the absence of any local manifestations may be explained by the seat of the lesions, which was situated so far away from the motor and sensory centres, which were in no degree compressed.

Reviews and Notices of Books.

The Elements of the Anatomy and Physiology of Man. By G. G. BALE, M.A. St. John's College, Cambridge. Student's Edition; pp. 292. London: Remington. 1879.

THIS treatise is an endeavour on the part of the author to produce a work on human anatomy and physiology which should present to the student a fairly accurate reflection of the exact state of this field of knowledge. He states that it was written whilst he was recovering from an illness as long ago as the spring of 1876, which may account for some of the errors and omissions we have noticed. The balance between anatomy and physiology is fairly kept, and the author has managed to introduce a considerable quantity of histology, whilst he has paid unusual attention to the illustrations, which number no less than 441, or more than two to every three pages, and as a rule are very fairly done.

The facts given are generally correct, and have been culled from works of good repute, and, though written in a condensed style, the accounts of the structure and function of different organs is sufficiently intelligible, and is made as interesting to the beginner as the space at the disposal of the writer would allow. It will probably prove most serviceable as an introductory text-book to physiology for a first-year's student. The points which we desire to bring under the notice of Mr. Bale, with a view to some change being made in the next edition of his work, are, amongst others, that the skin is stated to be one of the chief sources of gain to the body. Now it may be doubted whether any absorption at all is effected by the skin, but if he even admitted that some interchange of gases takes place, the oxygen absorbed is certainly extremely small in amount, and quite overbalanced by the carbonic acid and watery vapour eliminated. Again, in regard to saliva, it is stated that "its chief active principle is ptyalin which acts (weakly) upon hydrocarbons, especially starches, converting them into dextrine, grape-sugar, or lactic acid, and defending them from the acidity of the stomach." We should be disposed to take exception to almost every statement in this sentence except the first, and even in regard to that the term "ptyalin" has been applied to such different substances that it has recently been suggested its use should be discontinued. The author does not mean that ptyalin acts weakly on starches, for ptyalin is very active, but that saliva acts feebly.

The term "hydrocarbons" is a misnomer; the word intended to be used was "carbohydrates." Ptyalin does not convert starch unto grape sugar *or* lactic acid. Lactic acid fermentation is quite a distinct process, and not an effect of the action of ptyalin. Lastly, it cannot, we think, be said with accuracy that the action of the saliva is to *defend* the starches from the action of the gastric juice. The gastric juice simply does not act upon them, it does not exert any injurious action upon them. The subject of the pancreas is dismissed in seventeen lines, and yet eight lines are devoted to the pituitary body. What does the "early student" want to know about the pituitary body. The account of the coagulation of the blood would we fancy be objected to at any of the examining boards. The author describes the blood as forming a clot which sinks through the serum. What ground he has for saying that for each pulsation of the heart there are twenty million births and deaths of red corpuscles we are unable to say.

New Theories of the Great Physical Forces. By HENRY RAYMOND ROGERS, M.D. Published by the Author. pp. 107. 1878.

THIS little work deals with very large and interesting subjects—the light and heat of the sun, the force of gravity, the causes of winds, and the nature of sound. The author, proceeding on the principle that action and reaction are equal, considers that the heat and light of the sun are only phenomena existing where there is a body like the earth or one of the planets, which can give back, by a play of forces, what it receives. "Beyond the boundaries of the solar cone," he says, "no light is." Some of the statements of the author are, however, in flat contradiction to the best ascertained facts in science. He denies that the propagation of light requires time. He denies that the surface of the earth, or objects upon it, can reflect light. He regards the "thunderbolt" and the aurora borealis as substances, and, in fact, runs counter to so many well-established facts that we are bewildered, and can only recommend our author to take some books on natural science, rusticate for twelve months, and then rewrite his treatise, which may perhaps contain a germ of truth in it.

Atlas of Histology. By E. KLEIN, M.D., F.R.S., and E. NOBLE SMITH, L.R.C.P. Parts II., III., and IV. London: Smith and Elder. 1879.

THE second part of this Atlas is, we think, better than the first. It contains four carefully executed plates: the first two representing endothelium as seen in the mesentery of the cat and newt; the central tendon of the diaphragm; the lymphatic sac of the frog; tendon and other regions. In the last two plates the cells of the cornea are represented. One or two of the drawings are copied from Professor Klein's drawings, published in his "Anatomy of the Lymphatic System"; but the rest are original. Most are coloured. The appearances are those seen under an enlargement of 350 or 400 diameter.

The plates in the third and fourth parts contain illustrations of the following tissues:—Fibrous connective tissue; elastic tissue—the specimens being taken from the mesentery, the subarachnoid tissue, the aorta, and the ligamentum nuchæ; adipose tissue; pigment cells; cartilage, divided into hyaline, fibrous, and reticular. This last is very prettily illustrated. But we have seen better representations of fat than are here given; in fact, the fat-cells of adipose tissue are not shown at all. The whole of the fourth part is occupied with an account of the structure and development of bone. The results of the processes of staining which have

been adopted in preparing the original sections are here reproduced in colours, and with excellent effect; the parts formed by the periosteum and by hyaline cartilage being very distinctly seen.

We do not know whether the text has been written by Professor Klein, but there are some modes of expression adopted which lead us to think that such is the case, and here and there periphrases might have been avoided if the proof had been submitted to an Englishman. Another point that we should suggest is that some references might be given in the text to the particular figure illustrating the statements made; at present the text is quite continuous, and the reader must find out for himself the drawing illustrating the point under discussion. If, however, a footnote were given referring to the plate and figure or if this were enclosed in brackets, it would materially assist the reader. Altogether the drawings are both effective and true, though not very highly finished.

A Handbook of Nursing for Family and General Use. Published under the direction of the Connecticut Training School for Nurses, State Hospital, New Haven, Connecticut. Philadelphia and London: J. B. Lippincott and Co. 1879.

SINCE nursing has become the fashion among ladies, and people have begun to appreciate the fact that a woman makes a good and capable nurse just in proportion to the amount of training and instruction she has received, the demand for works devoted to the subject of nursing has been considerable, and this demand has been more than complied with. It is not possible to deal adequately in a book with a matter which is so purely practical as is the art of nursing, and most works on the subject must, we should think, fail almost entirely to help forward the skill or the knowledge of the nursing tyro; and many of the works are written in so sentimental and foolish a strain as to give the nurse who reads them an absolutely false impression of her duties and her position.

This little book, which emanates from the Connecticut Training School, is one of the most satisfactory works on the subject of nursing we have seen; and although it is not free from Americanisms, which jar a little upon the ears of English readers, its arrangement is so good, and the amount of information it contains is so sound and so forcibly stated, that it cannot fail to be popular. We especially commend its absolute freedom from cant and sentimentality, which are quite out of place when discussing the dry details of a useful but modest profession.

The work is written in paragraphs, each paragraph having the clue to its contents printed in italics at its head. We choose two as examples which seem to us to contain very sound advice.

"*Stationary Basins.*—If there is a stationary basin in the room, put in the plug and fill the basin full of water, which must be changed from time to time; or stuff a towel into the basin so as to close the overflow-holes also, and then cover it with a stiff paper or board, and never empty anything into it or use it in any way."

"*Reasons for not using Stationary Basins.*—The water you bathe your patient in, or use for any purpose about a sick room, is very impure, and if emptied into the basin will form a slime round the pipe, and the impurity will escape into the room again in the form of foul air. The waste-pipe also is almost sure to be defective, and sewer gas may rise through it from other parts of the house or from the street."

Every department of nursing is dealt with in this manual—medical, surgical, and monthly nursing. The remarks on monthly nursing are really excellent, and are in a great degree derived from a translation, by Dr. S. H. Chapman, of a Prussian handbook on the subject. A short and very practical chapter on hygiene concludes the volume.

CELIBACY, MARRIAGE, AND MORTALITY.

IT is to be regretted that the schedule of our English death-register does not afford the means for the calculation of such statistics as Dr. Bertillon has recently published, with a view to determining the relative effects of celibacy and marriage on the death-rates, and inversely on the health, of males and of females, at different ages in England. The English registration schedule does indeed supply the data for ascertaining the relative rates of mortality among married and single women, but this inquiry has hitherto found no place in the reports of the Registrar-General. With regard to males the English death-register gives no clue to civil condition at the time of their decease. This subject was, however, carefully and elaborately investigated by Dr. Stark in the Seventh, Eighth, Ninth, and Tenth Annual Reports of the Registrar-General for Scotland (1861–4), the Scotch registration-schedule affording greater facilities (especially as regards the deaths of males) than does the English schedule. The conclusions at which Dr. Stark arrived did not materially differ from those recently published by Dr. Bertillon, and may be summarised in the following manner:—

In the Tenth Annual Report a table was published showing the deaths of married and unmarried men in Scotland during the two years 1863 and 1864, at each quinquennial period of age from twenty to one hundred, showing also the proportion of deaths at each group of ages to the numbers living at the same ages, both married and single. It may be stated that the widowers were in these calculations classed with the married men, and not with the unmarried men, which heading signified bachelors. We are not aware that similar investigations had been attempted previously to those of Dr. Stark, who found that "the influence of marriage on the mortality of the male sex, instead of being inappreciable, as generally assumed, is of a most potent kind." He further expressed himself convinced by his researches that "bachelorhood is more destructive to life than the most unwholesome trades, or than residence in an unhealthy house or district, where there has never been the most distant attempt at sanitary improvement of any kind." The table shows that during the two years 1863 and 1864 the annual rate of mortality in the whole of Scotland among husbands and widowers aged twenty to twenty-five did not exceed 6·3 per 1000, whereas among the unmarried men of the same ages the rate was equal to 15·0 per 1000. Thus at these ages the proportional mortality among the comparatively small number of males married was considerably less than half that which prevailed among the far larger number of males who were unmarried at those ages. Marriage of men, especially at these early ages, may to some extent be taken as evidence of sound and vigorous health. It is a well-known fact that the rate of mortality among the insured, at every age, in the first year of their insurance is very considerably below the rate of mortality that prevails among the general population at similar ages; this is, of course, due to the medical examination of persons proposing to insure their lives, which has the effect of excluding most unsound lives. Few confirmed invalids marry at these early ages, when married men may be, to some extent, considered as selected lives. At each subsequent quinquenniad, however, the mortality of unmarried men considerably exceeds that which prevails among husbands and widowers up to eighty years of age, when the numbers become too small to yield trustworthy rates of mortality. The excess of mortality among unmarried men, however, is not proportionately so great in subsequent quinquenniads as it is under twenty-five years of age. Bachelors aged from eighteen to forty years include no inconsiderable proportion of men who, from natural infirmity, delicacy of constitution, or from dissipated or licentious habits, do not marry. This undoubtedly swells the mortality of bachelors at these ages, but as we find that at every successive year of life up to extreme old age the unmarried continue to die at a much higher ratio than the married men, Dr. Stark seems to have been justified in concluding that "it is marriage, and the habits connected with marriage, which is the cause of the difference," and in his remark that "statistics have proved the truth of one of the first natural laws revealed to man—'it is not good that

man should live alone.'" Dr. Stark pointed out that the mean age at death of married men in Scotland in 1864 was 59·1 years, whereas that of unmarried men above twenty years was only 40·2, showing a difference of nineteen years in favour of married men. This statement, however, is fallacious, as no correction was made for the fact that the mean age of living unmarried men is very considerably below the mean age of living married men; hence, although there is no question about the greater proportional mortality among unmarried men, nineteen years very far exceeds the difference in the true mean duration of life in favour of married men.

Dr. Stark's investigations bearing upon the relative rates of mortality prevailing in Scotland among married and unmarried women of equal ages, yielded results almost as unfavourable to celibacy as those relating to men, which we have just considered. It is probable that if it were possible to eliminate from the deaths among married women all those which are directly and indirectly due to childbearing, the influence of marriage upon the health of women would be as striking as it appears among men. During the childbearing ages (fifteen to forty-five) the mortality of married women somewhat exceeds that of unmarried women of similar ages, whereas after forty-five years the chances of life are markedly superior among married than among unmarried women. The excess in the death-rate of married women appears to be mainly confined to the first three quinquenniads of ages fifteen to twenty, twenty to twenty-five, and twenty-five to thirty; and it is far largest in the first quinquenniad fifteen to twenty, in which the excess of mortality is equal to 24 per cent., while it does not reach 16 per cent. between twenty and twenty-five, and is but 9 per cent. between twenty-five and thirty. In each subsequent quinquenniad the comparison of the rates of mortality that prevailed among the women of Scotland in the two years 1861 and 1862, is considerably in favour of the married women, except only during the five years forty to forty-five. With reference to excess of mortality among married women during this quinquenniad (when the usual change of life occurs), Dr. Stark remarked that this result "might be expected, seeing that the fatigues of childbearing and the harder labour connected with the nursing and rearing of her family, somewhat weaken the system, and render that critical period of life more trying to the married than to the unmarried women." With reference to the high death-rate of married women between the ages of fifteen and twenty years, it not only compares unfavourably with the rate among unmarried women of the same ages, but even exceeds that which prevails among married women during each of the three following age quinquenniads—twenty to twenty-five, twenty-five to thirty, and thirty to thirty-five,—although human mortality increases steadily with age, after extreme infancy. These figures undoubtedly point conclusively to the danger of childbearing to women before the frame has acquired its full development. Dr. Stark attributed the excess of mortality among married women at the earlier ages almost exclusively to the greater dangers that attend the delivery of the first child, and concluded that after the birth of her first child the married woman, even during the rest of her childbearing period, has an equal chance of life with the unmarried woman, and has a better chance of life after she has passed her thirtieth year. It was shown by Dr. Stark, in support of this conclusion, that in Edinburgh and Glasgow in 1855 87·8 per cent. of the married women delivered between the ages of fifteen and twenty bore their first child; between the ages of twenty and twenty-five years, 50·3 per cent. of the mothers bore their first child; and between twenty-five and thirty years, only 20·1 per cent. After thirty years of age, the proportion of mothers delivered of their first child is very small. Unfortunately the registration-schedule now in use in Great Britain does not afford the means for ascertaining accurately the degree of the excess of mortality which attends the delivery of women with their first child. Satisfactorily to determine the relative mortality among puerperal women in their first and subsequent childbearings, a very extensive series of observations would be necessary. It may be noted, however, that of 4423 deliveries recorded by the Birmingham Maternity Charity during the five years 1872–6, 264 occurred among primiparæ, the mortality being equal to 3·8 per 1000 deliveries; the rate of mortality among all the other deliveries did not exceed 2·9 per 1000. Bearing in mind the very large excess of mortality among married women aged under twenty years compared with that which prevails among unmarried women of the same age, there seems good reason to doubt whether the statistics of the Birmingham Maternity Charity afford a trustworthy basis for calculating the relative danger to mothers from their first and subsequent child-bearings.

The recent statistics of Dr. Bertillon confirm those of Dr. Stark, based upon the mortality statistics of Scotland, in affording good grounds for believing that the excess of mortality due to celibacy is far greater among males than among females. It is to be regretted that the registration schedule now used in England and Wales affords no facilities for investigating this subject, so far as the mortality statistics of males is concerned. It may be hoped, however, that the relative mortality of married and unmarried women at the various groups of ages may before long again receive attention from the Registrar-Generals of the three portions of the United Kingdom. In some of our large urban sanitary districts, moreover, the subject is well worth investigation at the hands of the local medical officers of health.

THE PARKES MEMORIAL MEDAL.

SOME time ago we announced to our readers that the committee of the Parkes Memorial Fund had, out of the collected money, founded a triennial prize of £100 and a gold medal to be given to the writer of the best essay on a subject connected with hygiene. Through the courtesy of the Committee we are now enabled to favour our readers with a tolerably fair representation of the medal, in obverse

and reverse, of the exact size. The motto, it may be perceived, is a singularly felicitous one; the few words of which it consists epitomize the labours of him whose memory it is desired to perpetuate, for his life was devoted to investigating and teaching the principles which govern the bodily and mental health.

As already announced, the first prize of £100 with this gold medal will be awarded in 1881 to the writer of the best essay "On the influence of hygienic measures in arresting the spread of Cholera." This prize is open to officers of Her Majesty's Army, Naval, and Indian Medical Departments

THE LANCET.

LONDON: SATURDAY, AUGUST 9, 1879.

IT will be well before the close of the session to take stock of the work done by the Select Committee for examining the Medical Bills now before Parliament. It is a generation since the organisation of the medical profession, and of the bodies which regulate admission into it, were subjected to the close attention of Parliament. Questions touching the efficiency of the medical profession cannot be exceeded in their importance. No statesman could do a more substantial service to the bulk of the community than by raising, even by a little, the minimum amount of education necessary to secure admission to the Medical Register and the rights of practice. For all this, such questions can never be much debated in Parliament. They are too technical. The number of members in either house that could take any serious or well-sustained part in such a debate will always be very few. In the absence of a Select Committtee, the Government is driven to almost the exclusive guidance of the Medical Council, which, up to this time, is so deeply interested a body that the value of its advice is greatly lessened. The only way for Parliament to excite the requisite amount of interest, and to get at the requisite amount of information, is to relegate the subject to fifteen or twenty of its members, and require them to study it from a common-sense point of view, and in the light of such information as can be got from all quarters. This has been done. Unfortunately the Committee was not appointed till the session was so advanced as to make it impossible for it to finish its work, and to examine all the witnesses whose evidence is essential for the formation of a sound judgment. But a good beginning has been made by the Committee under the presidency of Mr. FORSTER. Eleven witnesses have been examined. Of these eight were members of the General Medical Council, and three were outsiders. We do not propose to go in detail over the evidence of individual witnesses, or even to give the leading points of what they have said. We shall better arrive at a good estimate of what has been achieved up to this point by breaking up the subject into a few leading divisions, and trying to ascertain the tendency of the evidence already given in regard to each such division. Evidence has been taken as to—

1. The Council.
2. The Examining System, and the working of it.
3. The views of those who ask for medical reform and the objections to them.

Under these headings a great deal of ground and, of course, some confliction of evidence is covered; but we shall be content if the further evidence to be taken, we hope, next session, shows such a decided amount of practical agreement on a few main features as has been shown up to this point.

Taking first, then, the Constitution of the Council. The predominance of the Corporations in it is simply an undeniable fact. Sir JAMES PAGET has supplied a new and very questionable argument for their individual and separate representation—viz., that they require a place of defence. He saw no objection to the introduction of members representing the general practitioners, if they could be introduced without the ordeal of canvassing and election. Dr. ACLAND'S evidence on this point, as on many others, was so vague as to be worthless, except, indeed, that its very vagueness may be taken as evidence against the existing state of things. Mr. SIMON, though opposed to direct representation, as involving an inconvenient and costly process, was of opinion that there was a real grievance in respect of non-representation of the members of the different institutions in their governing bodies. Dr. QUAIN was against direct representation, and viewed the Council and its work with complete complacency. Sir DOMINIC CORRIGAN, Professor HAUGHTON, and Dr. ANDREW WOOD, were heartily in favour of direct representation, on the score alike of justice and expediency. Professor TURNER, too, approves of direct representation. Here, then, are eight members of the General Medical Council, five of whom are in favour of the Council being made more representative of the general body of the profession, without enlarging the sphere of its functions. Dr. WATERS, Dr. GLOVER, and Mr. HART, were perfectly at one in demanding this change, and in thinking that other changes would not be of much advantage unless accompanied with an alteration in the constitution of the Council, including not only a direct representation of the profession, but an abatement of the Corporation representation. Thus eight of the eleven witnesses examined up to this time on this important point are favourable to a change in the constitution of the Council.

As to the Working of the Council and its Functions. The most serious evidence has been adduced to show that the Medical Council does not work well; in other words, that it does not effect changes which, in its own opinion, are necessary and urgent. Several illustrations have been given of this. Let one suffice here, though there are many. In 1870, as Mr. SIMON showed, the Council, by a majority of 17 to 1, voted in favour of a Joint Examining Board in each division of the kingdom. Up to this time the formation of such a Board is not realised. Various other striking illustrations have been given to the Committee, and have not been contradicted. Notwithstanding these glaring proofs of the powerlessness of the Council, nearly all its members are in favour of a continuation of "moral suasion," and of keeping the Council without power to enforce its deliberate decisions on urgent questions in medical education. Even Sir JAMES PAGET deprecates any attempt to give an authoritative character to the Recommendations of the Council. Nay, more, he hopes it will seldom Recommend. We venture to say that the actual Recommendations of the Council on the subject of Medical Education scarcely number a dozen, not one for each year of the Council's existence. Sir JAMES would still further attenuate the influence of the Council. This is the most powerful proof which it is possible to have of the deep subordination of the Council to the individual bodies, though at its table it receives all their representatives, and though its discussions record all their experience. Of course all reformers demand that the Council shall be endowed with authority to

enforce its decisions. This is of the very essence of their demands. And their case is only strengthened by the Council's wish to remain powerless after all its failures to improve medical education, as shown by the increasing rejections both at the First and the Final examinations.

2. The Examining System. Two witnesses of the eleven wish for no change in the examining system further than to make it compulsory on candidates for registration to be doubly qualified. These witnesses were Professor TURNER and Dr. ANDREW WOOD. But Professor TURNER proposed a scheme under which the Conjoint Board might be represented in the University examinations, and Dr. ANDREW WOOD admitted that he did not think a Conjoint Scheme would hurt his College. All the other witnesses were in favour of Conjoint Boards, as the very least reform that would meet the evils of the present system; though some were in favour of a State Examining Board, independent of Corporations, and not dependent for a "livelihood"—to use Mr. SIMON'S word—on passing men into the profession. Nearly all the witnesses agreed that there was great inequality in the existing examinations, which would be reduced if the boards were reduced to three, as being more easily supervised and systematically inspected. Up to this point there is an overwhelming concurrence of evidence in favour of consolidation of the examining bodies.

3. As to the Views of those who ask for Medical Reform. Under this head great good has been done by the investigation of the Committee. The most systematic misrepresentations were made, even by those of whom better things might have been expected, of the low and revolutionary views of those who have opposed all past Government Medical Bills as inadequate and evasive of essential questions. But these have been completely exposed in the evidence of those asking for reform. The admirable memorial of 1869, promoted by the Medical Reform Union, and signed by nearly 10,000 practitioners, was as moderate and sensible as any document that could even now be framed after ten years more of failure on the part of the Medical Council. Dr. WATERS, Mr. HART, and Dr. GLOVER, alike disclaimed any wish to see the Council take up new kinds of duties, though distinctly of opinion that, as the guardian of the Register, it should vindicate its purity, sometimes by penal measures. These gentlemen based their case against the Council chiefly on its inefficiency as a Council of Medical Education. Viewing, then, the substantial amount of evidence already taken in favour of a change in the constitution of the Council and of a change in the examining system, we look with satisfaction to the work already done by the Committee. There is a lot of opposition to reform yet to come, but there is more support. There are some powerful voices yet to be heard in this cause. The Select Committee have shown great patience and courtesy. They are just beginning to see into the subject, and a few months' rest will, we trust, enable them to complete an investigation which promises a much-needed adaptation of old Bodies to new conditions.

IT cannot be denied, notwithstanding its somewhat weak character, that the Sale of Food and Drugs Act has been productive of beneficial results, even to a much larger extent than was to have been anticipated, and that it has acted as a powerful deterrent of adulteration. Recently, however, the operation of the Act has been almost in abeyance, owing to the opinion entertained by some of the judges that it was necessary the purchaser of any article should prove that he himself had been prejudiced thereby. But this difficulty has now been overcome by the amended Act just passed.

The practice of adulterating or diluting spirits with water is a very old and common one, and hitherto there has been a great difficulty in dealing with it effectually, owing to the absence of any authoritative declaration as to the proper alcoholic strength of such spirits. In order to meet this it has been provided in the amended Act that spirits, as brandy, whisky, and rum, must not be reduced by admixture with water below 25° under proof, and for gin below 35°. Now spirits of the former strength contain 42·7 per cent. by volume of absolute alcohol, and of the latter strength 37 per cent. Turning to THE LANCET Reports of the Analytical Sanitary Commission, we find that the strength of the various samples of brandy then tested varied greatly, and that the alcohol ranged from 30 to 50 per cent.; in rum from 27 to 47 per cent., and in gin from 22 to 48 per cent. by volume; some of the samples examined containing little more than half as much alcohol as others, and their money value being thus reduced nearly one-half. It is obvious from the figures above given that, had the standard of the amended Food and Drugs Act been in force at the time THE LANCET analyses were made, the vendors of very many of the samples would have fallen under its operation, and would have been liable to prosecution and conviction. There is reason therefore to conclude, although the limit of strength fixed by the Act is somewhat low, yet that it will have the effect of protecting the public against fraud by the undue dilution of spirits with water. The question of the strength at which spirits may be sold is a very important one, affecting as it does the health, the purse of the consumer, and the revenue. The latter would appear to have great interest in not allowing spirits to be sold in too diluted a form.

It is to be regretted that the Act does not lay down a limit fixing the strength or quality below which milk should not be sold—a question of still greater importance. Milk being a secretion, and containing a variety of constituents, it, of course, varies even with healthy cows, some milks being very rich, others of fair average, and some again of inferior quality. This variation renders it imperative that there should be a limit, and this intermediate between the richest and poorest qualities. The Society of Public Analysts, which, for the short time it has been in existence, has done much valuable work in relation to the subject of adulteration, has adopted a standard, and regards any milk as adulterated with water which does not yield 9 per cent. of solids not fat. This standard, if generally enforced, would secure for the public milk of passable, but by no means rich, quality. Since, however, the most valuable constituent of milk is its cream, it is necessary that at the same time some limit should be fixed below which the cream and fatty matter should not be allowed to fall, in order to meet the case of such frequent occurrence of the substitution of "skim" for whole milk; and this the Society has fixed at the low point of 2·5 per cent. The standard adopted by the Society of Analysts is surely low enough, but it is not sufficiently so to

satisfy some objectors. Thus the Somerset House chemists, finding that it occasionally happens that some few unfortunate cows yield a milk which furnishes less than 9 per cent. of solids not fat, would adopt a standard so low as to allow of the sale of milk adulterated with a large proportion of water. The great evil of a low standard for milk and other articles is that the vendors will work to this standard, and in the case of milk they will take care that the public do not obtain a milk of greater strength than they are required to sell by law. The result will be an infinitely worse state of things than the Act was intended to remedy. Before that Act came into operation good and rich milk was to be obtained abundantly, as well as much that was impoverished by admixture with water; but now what is to be feared is the reduction of the article to a dead level of inferiority.

There seems, however, to be a way out of this dilemma. Strange to say, in the Sale of Food and Drugs Act, which was designed to put an end to the sophistication of articles of food, drink, and drugs, the word "adulteration" does not once occur, the framers of the Act being no doubt deterred from its use by the difficulty of defining what should be included under the term. Notwithstanding this, however, the Act is really more comprehensive than had the word been used, since it deals not only with intentional admixture or adulteration, but with quality as well. Thus it states that no person shall sell any article of food which is not of the nature, substance, and quality demanded by the purchaser. Applying this provision to the case of milk, supposing the purchaser to ask for good or the best milk, and he received instead milk of poor quality, he would have a right of action against the vendor, quite independently of any question of adulteration. It would be well, therefore, that purchasers of milk, with a view to having it tested by the public analyst, should ask for good milk.

It is also to be regretted that the amended Act does not put an end to the Chemical Court of Reference at Somerset House, the existence of which is an anomaly and an affront. From the decisions of this Court there is no appeal, no matter how erroneous the decisions may be or how far opposed to scientific accuracy, and therefore to justice. From the decisions of the judges of most of our courts of law an appeal is allowed, but the decrees of the Court in question have to be accepted as infallible and irreversible.

EVERYTHING of which the community stands continually in need has a fixed market value, except medical service; and it is a canon of political economy that the price set upon it must be paid if the necessary or luxury—whichever it may be—is supplied. Bread is even more urgently required than physic, but no reasonable man deems it incumbent on the farmer, the miller, and the local baker to furnish this article at the demand of the hungry without a due recompense for the money and labour expended on its production. Nor do boards of guardians, or committees of philanthropic persons engaged in the management of almshouses, asylums, and schools, expect to obtain the services of the purveyor of food in aid of their benevolent enterprise except on the equitable terms of barter. The tradesman may be a wealthy and liberal man, and his name will possibly appear on the subscription-list of many local charities, but no one thinks of asking him to furnish the store-room of a public institution out of his stock-in-trade, or counts on any considerable reduction of his prices on the score of generous impulses. On the contrary, it would be considered mean and derogatory to the dignity of public, or even State, charity, to cheapen the market value, or scheme deeply and persistently to obtain supplies, of food and other necessaries for benevolent purposes. Whereas no one thinks it unworthy or unwise to resort to any expedient which holds out the promise of securing the services of the practitioner of medicine in aid of the poor, without reference to the claims or losses of the professional man, asked, and expected forsooth, to render assistance on the plea of humanity. Why is this plea of humanity never heard of in connexion with the furnishing of loaves of bread, or even such legal advice as the committees of charities want in the conduct of their business? It is only the "doctor" who is expected to labour for love, or honour, or personal interest, while others claim the credit of any sacrifice of time and strength which he may render! There is so much mystery, and we take leave to say nonsense, about this subject of medical charity, that a few plain truths, couched in homely language, may not be wholly out of place when the strain and pressure of ingenuity set upon devising new methods for cheapening professional service, are felt encroaching at fresh points, and in strange disguises.

Under pretence of meeting the reasonable demands of the working classes, and with the affectation of relieving the hospitals and free dispensaries, preventing the recourse to sinister deceptions, and protecting the needy from the avarice of the quacks, a system of self-supporting dispensaries is springing up which cannot fail to be a source of tribulation to the practitioner. He should be warned in time, and take the subject of these so-called dispensaries into serious consideration. The clubs, with their custom of paying the local surgeon a miserable sum per head for each member on the insurance principle, and the burden of a barely-requited attendance on the families of members, was bad enough; but this dispensary scheme, by which the practitioner is to be wheedled or entrapped into giving advice, and perhaps medicine, at a price that can never pay him, is one that bears more seriously on the profession, because it will, in fact, take in the majority of the working classes, and by its collateral influence tend to lower, instead of maintaining, or even raising, the scale of general medical charges. It does not seem to be recognised by practitioners who are lending their aid to this new device for the reduction of fees that any extension of the movement beyond purely local circles, or above the lowest limits, must needs react injuriously on the profession as a whole. Of course it will always be the fact that certain leading men in a district can charge what they please, and, having a high personal reputation, will doubtless command a large *clientèle*. Such physicians and surgeons can take care of themselves and their special interests. Our present concern is with the general body of practitioners, and we contend that if the system of "self-supporting dispensaries" is carried the breadth of a very narrow line beyond the bounds of prudence, it *must* end in a serious and irremediable reduction of the already low scale of medical fees. The danger of the movement lies in the

fact that its inevitable consequences may not be immediately perceived. In certain districts it will no doubt be possible to plant an institution of this character in the midst of a dense population, without offering any inducement to the classes just above the social level of those for whom it is provided to appropriate the advantage offered, or, which is very likely, to press for a corresponding reduction of fees in their own interest.

The medical promoters of these dispensaries must face the fact that just as the co-operative stores have had the effect of compelling retail tradesmen generally to lower their charges, so the establishment of cheap dispensaries for paying patients—who are not to be regarded and will not deport themselves as objects of charity—must in the long-run reduce medical fees to a minimum. The prospect is even more threatening to the professional man, whose commodity is his personal skill, than to the tradesman, who can always plead, and prove, the fact that his profits must be exhausted by any further lowering of prices. The practitioner has no such barrier behind which to retreat in the financial extremity which threatens him. He may be pressed, and squeezed, and undersold, until his fee is reduced to the smallest coin of the realm, and still it will be contended that whatever he receives is pure gain. The argument that a medical man must live and maintain his family will not serve him, because it is always practically assumed that the professor of so benevolent an art as that of healing must needs have a competence to fall back upon. We have repeatedly urged upon young men entering the profession that such ought to be the fact, but this does not affect the question that the practitioner of medicine is worthy of his hire, and we maintain that he is going the way to reduce his wage to a wholly unmarketable figure by yielding step by step to the pressure brought to bear on him by those who like nothing better than to earn a character for benevolence at the cost of their neighbours. We insist that these so-called self-supporting, but in fact doctor-starving, dispensaries are an economic blunder, and the time cannot be far distant when this will be perceived. Within the limits of a small district, or in the lower parts of a populous town, the evil results may not be felt so long as a majority of the busiest practitioners combine, but it only wants time to ripen the fruit, and its bitter and destructive properties will assuredly make themselves felt. It will be a fortunate circumstance if, when the discovery of consequences is made, it is not too late to uproot the Upas tree and put an end to its devastating effects. If the profession as a body had the moral courage to speak out boldly on this subject of medical fees, and to protest once for all that it has no wish to earn spurious credit for philanthropy by vending its skill—the practitioners' commodity—below its proper market value, the downward tendency of that value would not be so rapidly developed, because it is from the undermining influence of a mock generosity it receives its impetus. Against this generosity, which takes the form of giving professional services as though they were worth nothing and had *no* market value, we warmly protest. If physicians and surgeons and general practitioners must needs continue to be the largest subscribers to such public charities as hospitals and dispensaries, let their contributions be entered at their proper money value in the list of annual subscriptions, and so at least recognised, instead of being entirely overlooked because the contribution is made in kind.

THE satisfactory working of the Penal Servitude Acts has for years past been a matter of anxious consideration, and the report recently published by the Commission appointed for that purpose will be read with interest by those who are anxious to see crime deterred by strict punishment, whilst at the same time no injustice is inflicted on the prisoner. The report deals only with those establishments set aside for the reception of prisoners incarcerated for periods of five years or more, and on the whole it may be said the report shows the system to be working fairly well, though in many points it requires modification. As the Penal Servitude Act at present stands, male convicts in England are subject to three stages—(1) a period of strict separate confinement; (2) a period on public works; and (3) a period on licence, if remission of any portion of the sentence is earned. The period spent on public works seems to be the most beneficial to the criminals, teaching them as it does habits of industry, and training them to such employments as digging, road-making, quarrying, stone-dressing, &c. This kind of rough work is most easily obtained by convicts on their release, without those strict inquiries as to past character which in many other employments would interfere with their chance of an engagement. With regard to the period of strict separate confinement, we think it might be considerably reduced. We are altogether doubtful as to its moral efficacy; it is, however, a pet hobby of the official mind. What has always struck us as most needed in our convict system is a better system of classification. We are pleased to see this subject has attracted the attention of the Commissioners, who recommend two modes of classification—division of prisoners into classes, according to the crimes for which they are undergoing punishment; and the formation into a distinct class of those against whom no previous conviction of any kind is known to have been recorded. The Commissioners recommend the latter plan; but it is possible, we think, that a combination of the two would be more likely to meet all requirements more satisfactorily. The recommendation that the judges, in passing sentence, should declare in open court the amount of remission which the convict may earn by industry and good conduct, is a wise one. The diet question is undoubtedly a most difficult one, and we think that, with regard to our prisons, is still far from being satisfactorily solved. The physiological requirements of different individuals are so various, that it is extremely difficult to frame a dietary that shall be sufficient for all without being too indulgent. The fact that some of the prisoners eat their candles shows that for some at least the fatty elements of the food are not sufficient. We are of opinion that the whole of the diet question should be revised under the superintendence of some of our leading physiologists, a more extended system introduced, and the diet of each prisoner regulated entirely by the medical officer of the prison, and not left to the discretion of the governor. The recommendation that a superintending medical officer of high standing, who would have the oversight of the medical arrangements in all convict prisons, is a wise one, and has been frequently urged in our columns. The duties of such an officer are obvious. He

should visit each prison periodically, inspect the hospital and convicts under punishment in each prison, should be consulted in supposed cases of malingering or cases of unusual difficulty, and should report on the condition of each convict in the prison, and ascertain from the records of weight and other data the effect that the prisoner's work and diet was having on his constitution. The Commissioners object to the iron cells used in some of the prisons. At Dartmoor and Portsmouth some of these iron cells are so dark that it is nearly impossible to see to read in them; nor is their ventilation satisfactory, an observation that applies also to a certain number of the solidly-built cells. Finally, the Commissioners, with one exception—Dr. GUY,—recommend that some gentlemen of authority and experience should be requested to undertake the duty of visiting the convict establishments from time to time, and reporting to the Home Secretary any matters which appear to them to require attention. It is suggested that they should have free access to the convicts and to every part of the prisons, but should have no power to give any order or to interfere in any way with the discipline or management. It is natural that such a proposition should be resented by the prisons authorities as represented by Sir EDWARD DU CANE and Dr. GUY, but it is nevertheless a highly salutary one. The official mind has a tendency to harden and resist improvements long after the necessity for such improvements has become apparent to outside observers. But, above all, it is important that the criminal should have an impartial court of appeal, and that the public should learn from independent observers that matters were conducted honestly and righteously within the walls of our prisons, and that no tyranny or injustice was allowed to reign within.

Annotations.

"Ne quid nimis."

ST. MARY'S ORPHANAGE.

THE sudden death of three boys in St. Mary's Catholic Orphanage, North Hyde, to which we drew attention in THE LANCET, July 20th, will not be allowed to pass unnoticed. For at a recent meeting of the Marylebone Board of Guardians, on the motion of Mr. J. B. Sedgwick, the following resolution was unanimously agreed to:—"That the Local Government Board be informed that unless immediate steps be taken to improve the sanitary arrangements at the North Hyde Roman Catholic Schools, the guardians will be compelled to remove to their schools at Southall all boys chargeable to the parish of St. Marylebone, at present at North Hyde." It is therefore to be hoped the Local Government Board will institute a searching inquiry into the causes that led to the catastrophe. Indeed, in the face of the numerous complaints that have been made as to the sanitary arrangements of the school, we are surprised that they have not ere this taken action in the matter. It will be remembered that Dr. West, who visited the school to investigate into the cause of the outbreak, was disposed to attribute the deaths to some irritant poison taken by the boys in some sweetstuff they bought when out for a walk; but Dr. Stevenson, who submitted the contents of the stomachs to a chemical analysis, could detect no poisonous substances in them. On the other hand, it was shown very conclusively by Mr. Bond, of the Westminster Hospital, at the inquest, that the earth-closets in use were in a very unsatisfactory condition. Mr. Bond's opinion is further borne out by the reports of the visitors of the board of guardians. For instance, in 1873, it is reported that "the principal playground is the large court around which the buildings stand; the first object that strikes the eye on entering this court is the division across the centre, formed by a wall of privies and urinals on either side, offensive alike to smell and sight; the privies have doors, but the urinals are perfectly open to the court—a most objectionable arrangement, as the boys naturally acquire habits repugnant to public decency"; also that the dormitories appear to be overcrowded, and in one part of the building are provided with earth-closets; these closets are very small and separated from the ward by one door only, they are ill-ventilated, and the smell is at times very offensive."

Reports of a similar nature have been made since then; but it will be hardly credited that, notwithstanding these serious representations respecting an establishment containing nearly six hundred boys, no attempt had been made previous to the occurrence of the outbreak in question to remedy the defects. As the school has been certified by the Local Government Board, although there are no certificated teachers or female nurses—to be fitted for the reception of pauper children, it was clearly their duty to exercise their control and see that the sanitary defects pointed out in the visitors' reports were speedily remedied. The circumstance certainly that strikes us as most extraordinary is the fact that there are no female attendants in this institution. It is certainly quite impossible that a proper degree of cleanliness can be maintained without female help. It is to be hoped the Local Government Board will speedily awake to their responsibility in this matter, if not, attention ought to be called to it in Parliament before the close of the session. It is long since such a scandal has occurred in connexion with one of our pauper institutions, and we had begun to hope that the evil days of neglect and dirt had passed away, and that the vigilance of the Government inspectors would prevent the possibility of their recurrence.

"TEMPERANCE."

EVERYTHING that concerns the health of the people has a distinctly medical aspect. It is from this point of view we regard the question of "temperance." Alcohol, in all its forms, is dangerous to health and morals, to body and mind. It may be necessary to use fermented drinks as stimulants with food; but it cannot be said of any intoxicating beverage that it is itself, in a broad and practical sense, an integral part of ordinary diet. Its action may be, and doubtless is, in many cases, contributory to health, but it is not essential as aliment; and, like every other medicinal article or drug, there is in theory, if not in fact, a drawback to its use, and urgent need to prevent its abuse. A condition of matters wherein alcoholic drinks form the staple of thirst-quenching commodities is obviously unnatural, and must ever be fraught with peril to the community. Dilute acetic acid, the vinegar of commerce, is pleasant and probably useful as a condiment, and it forms the basis of many admirable and appetising sauces, of which most persons partake pretty freely, and, on the whole, to their advantage; the medicated waters and many occasional beverages are valuable in certain states of the system, and benefit rather than injure when taken in moderation; but even these things, all good in their place and time, would be hurtful if taken in excess. How much more perilous must it be to take habitually and at odd times and seasons, when the stomach is empty or when it is digesting food, quantities of a more or less strong alcoholic liquor? That the habit of drinking stimulants has long persisted in this and other "civilised" countries, and that the European constitution has fairly well resisted, or perhaps we ought to say disguised, its

effects, affords no sufficient explanation of the circumstance that the practice is continued, and even defended, now that its senseless nature and injurious tendencies are perceived.

It may be, as we have said, that the majority of educated persons require to be often under alcoholic treatment. It is conceivable that a nation might, racially, so impair the faculty of eyesight that the greater part of the population should be compelled to wear glasses; but if, failing to recognise the real cause of this state of things, spectacles came to be regarded as a part of dress, and everybody adopted them independently of any individual need, the position would be ridiculous and entail serious evils. The illustration may appear crude, but this is precisely what has happened in regard to the common use of intoxicants. Everybody takes this medicine because it happens to be pleasant, and to give the "nerves" what is called "a flip up," and the habit has grown to be part of our hereditary and racial nature, so that it is practically forgotten that the article is a drug, and by no means one suited for general and unguarded consumption. Setting aside all mere conjectures, and avoiding even the suspicion of overstatement, it must be apparent to every thoughtful practitioner that to the direct or indirect, the hereditary or acquired effects of alcohol in one or other, or many successively, of its forms we owe a large part of the disease to which the healing art is opposed. It is, therefore, impossible that the medical profession should fail to feel a constant and growing interest in the cause of temperance, or to be animated with a sincere desire to mitigate the disastrous consequences, and discourage the practice, of reckless and habitual dram-drinking. Our only quarrel with the teetotalers is that they trust too much to prohibitions and pledges of total abstinence. With the same ultimate purpose, but a more practical knowledge of the needs of the people, we preach *moderation*, and in furtherance of this judicious reform, we hail anything and everything that may be claimed as an incentive to sobriety.

SMALL-POX IN THE HAMPSTEAD HOSPITAL, 1876-1878.

THE report, recently issued, of the medical superintendent of the Hampstead Small-pox Hospital (Mr. Samuel Bingham) for the period during which that hospital was in use from November, 1876, to the end of 1878, is a most interesting and instructive document. The total number of cases of small-pox admitted to the hospital during this period was 3352, and the rate of mortality for the whole period was 19·0 per cent. The unvaccinated formed 25·26 of the admissions—a proportion, Mr. Bingham remarks, supposed to be three times greater than exists among the general population. The mortality among this class of patients was 46·6 per cent. The vaccinated (irrespective of quality of vaccination) among the admissions numbered 2452, the mortality of this class being at the rate of 9·1 per cent.—that is to say, one-fifth only of the death-rate of the unvaccinated. The mortality among the vaccinated had a direct relation to the quality of the marks. Thus (irrespective of number) the rate among those with good marks was 5·6 per cent.; with moderate marks, 8·9; and with bad marks 14·6. Similar differences in the rates of mortality between the unvaccinated and the vaccinated were observed in the different varieties of small-pox. Thus, in the hæmorrhagic form, all died among the unvaccinated, 97.7 per cent. among the vaccinated; in the pustular hæmorrhagic, 8·28 among the unvaccinated, 74·7 among the vaccinated; in the confluent, 51·1 among the unvaccinated, 15·2 among the vaccinated; semi-confluent, 11·8 among the unvaccinated, 0·9 among the vaccinated; discrete, 4·0 among the unvaccinated, 0·3 among the vaccinated. Of the 2452 vaccinates admitted 222 *only* appear to have exhibited the signs of satisfactory vaccination required from public vaccinators by the National Vaccine Establishment—namely, *four good marks* or more. Including with this class the patients presenting three good marks, the total would be 476. A few of the patients stated that they had been revaccinated, but the evidence as to this was doubtful. Of the servants, nurses, and others employed about the hospital while it was open, more than 200 in number, all but *one* had been satisfactorily re-vaccinated before entering upon their duties. The one referred to had been accidentally overlooked, and he alone contracted the disease. Mr. Bingham thinks that the age for revaccination might be advantageously lowered from puberty to ten years, as being then more completely under the control of parents and guardians. The report contains some thoughtful observations on the modes in which small-pox comes to be disseminated amongst communities, which deserve consideration. Mr. Bingham's observations also on keeping down odour in small-pox wards by a sufficiency of space and ventilation should tend to remove much popular and some professional error on the subject.

THE REGISTRAR OF THE GENERAL MEDICAL COUNCIL.

ONE of the very reasonable resolutions of the Council at its last meeting was to the effect that an additional honorarium of fifty guineas be given to the registrar on account of extra duties connected with dental business, and that in consideration of the additional duties devolving on the registrar in consequence of the passing of the Dentists Act, his salary be £600 a year, whereof, pursuant to a foregoing conclusion, one-half shall be borne by the General Council, one-fourth by the English Branch Council, and one-fourth by the Dental Fund, the payment of the salary to date from the passing of the Dentists Act. In October last the Council voted the sum of one hundred guineas to the registrar out of the Dentists' Registration Fund. Considering the large amount of money that has accrued to the Council from the registration of dentists, and the enormous amount of labour and trouble that have accrued to the registrar, we scarcely think the remuneration of Mr. Miller adequate. We have never altered our opinion of the great error of the Council in not appointing a medical man to the office. But no other layman could well have brought more clearheadedness, industry, and intelligence to the work than the present registrar.

THE CASE OF PATRICK GRIMES.

THE explanation given by Mr. Lowther, in answer to a question put to him in the House with reference to the case of Patrick Grimes, who recently died in Armagh Gaol, after the prison surgeon, Dr. Palmer, had written both to the Prison Board in Dublin and to the Secretary of the Lord Lieutenant stating that he considered the life of Patrick Grimes "*to be in imminent danger by further confinement*," must be deemed unsatisfactory. Dr. Palmer deposed at the inquest that he had received no reply to these letters from the officials. In spite, therefore, of this remonstrance, the man was kept in prison till he died. This is the main point at issue, and is not to be lightly dismissed because it so happened that six prisoners were put on the jury. The real question is, why the prison surgeon's distinct statement that the prisoner's life was in danger by further confinement was ignored by the officials. Dr. Palmer, at the inquest, gave it as his opinion that the new "scale of dietary adopted by the Prisons Board is not sufficient." In commenting upon the somewhat parallel case of John Nolan, who died last November in Clerkenwell Gaol, we expressed a somewhat similar opinion, and urged that the effect of the altered dietaries upon the prisoners should be carefully watched. Whilst we would welcome an economy that reduces the

expenditure of our prison establishments, we would be exceedingly jealous lest the health of the prisoners should be injured by undue severity or restriction in what was absolutely necessary for their proper nutrition. We think, taking the cases of John Nolan and Patrick Grimes as instances of how the prison system can break down, the public may fairly doubt whether the best system of prison management has yet been instituted, and whether it is altogether wise to hand over our criminals so entirely to regulations and dietaries devised by officials and reported on by officials. It would be a satisfaction to a large section of the community if a permanent visiting commissioner were appointed annually by Parliament to make a searching inquiry in cases like those of John Nolan and Patrick Grimes, uninfluenced by the official mind.

DEATH OF SIR THOMAS MACLEAR, F.R.S.

OUR profession has just lost another distinguished member of it, less known, however, in medical than in astronomical science. Sir Thomas Maclear passed his examinations and was admitted a member of the Royal College of Surgeons of England so long ago as 1815, when he was at least twenty-two years of age; consequently at the time of his death he must have reached the great age of eighty-six years, ten years younger than Sir William Blizard, under whose presidency he was admitted a member. He commenced the practice of his profession in Bedfordshire, but, always partial to astronomical studies, he soon made the acquaintance of another veteran in age and science—viz., the late Admiral Smyth, the well-known astronomer, and father-in-law of Professor Flower. The admiral induced him to desert medical for astronomical science, and proceed to the Cape of Good Hope to make some important investigations, these being crowned with singular success, deservedly obtaining for him the appointment of Astronomer Royal at the Cape of Good Hope, and the fellowship of the Royal and other learned Societies at home and abroad. The deceased gentleman received the honour of knighthood by patent, and in June, 1863, a pension of £100 per annum was granted him. The Medical Directory, from which we are accustomed to obtain so much information, has no mention whatever of him. Lady Maclear died in 1861.

NITRITE OF AMYL.

THE exact amount of vascular dilatation produced in frogs by the inhalation of nitrite of amyl has been carefully investigated at Heidelberg by Dr. Gaspey, who has detailed the observations in Virchow's *Archiv*. On the uninjured tongue of the frog the dilatation occurred immediately in both arteries and veins, and increased during the first two minutes. The duration of the dilatation depended upon the duration of the inhalation; if the latter was continued for two minutes, the dilatation lasted from ten to fifteen minutes. The amount of dilatation was at least one-third of the original diameter of the vessel. The rapidity of the blood-current remained about the same; in the first movement after dilatation it appeared somewhat quickened, but always quickly returned to the normal. In order to ascertain whether the nitrite of amyl acts upon vessels which are already dilated by some other means, irrigation of the frog's tongue with a solution of salt was employed, which is known to cause dilatation of the vessels and retardation of the blood-current. Amyl nitrite was found to still produce its effect, although in less degree—amounting to about one-fifth of the original size of the vessel. Experiments on the effect of the amyl in distant parts showed that the changes in the web of the frog's foot differed somewhat from those observed in the tongue. The dilatation occurred in about the same time, but was slighter. There was an immediate but very transient increase in the rapidity of the blood-current, followed by a distinct retardation.

Another point investigated was the effect of the amyl on tissues in which inflammation is going on. Its action on an inflamed tongue was found to be essentially the same as on the uninjured tongue, thus confirming an interesting observation of Mr. Talfourd Jones that hæmorrhage after injury may be increased by the amyl. Other observations on the frog's mesentery showed that the process of inflammation was not in the least interfered with by the inhalation. The migration of the white corpuscles was not lessened. It is known, however, by the experiments of Thorma and Appen, that as a rule, whatever accelerates the blood-current lessens migration, and whatever retards the blood-current favours migration. It seems, therefore, that the influence of amyl nitrite on the inflammatory process may be different according to the position of the part, since retardation of the current was observed in the frog's foot and was not observed in the tongue.

HOW WE CATCH COLD.

THIS pertinent question is just now engaging attention. There is another question which should be answered first—namely, What is *cold?* The old idea of a "chill" is, perhaps, nearer the truth than the modern notion of a "cold." The hypothesis would seem to be that a "cold" is something more than a cold, because, it is said, "You do not catch cold unless you are cold." The fact is there are probably as many diverse occurrences grouped and confounded under the generic title of cold-catching as diseases covered by that popular term fever, which is made to comprise every state in which the pulse is quickened and the temperature raised. By a parallel process of reasoning "cold" ought to be limited to cases in which the phenomena are those of a "chill." When a person "catches cold" either of several morbid accidents may occur—(1) He may have such a chill of the surface as shall drive the blood in on the internal organs and hamper some weak, or disorder and influence some diseased, viscus; (2) the cold may so impinge on the superficial nerves that serious disturbance of the system will ensue and a morbid state be set up; (3) the current of air which causes the cold may in fact be laden with the propagating "germs" of disease; or (4) the vitality of the organism as a whole, or of some one or more of its parts, may be so depressed by a sudden abstraction of heat that recovery may be impossible, or a severe and mischievous reaction ensue. The philosophy of prevention is obviously to preserve the natural and healthy action of the organism as a whole, and of the surface in particular, while habituating the skin to bear severe alternations of temperature by judicious exposure, and natural stimulation by pure air and clean water, and orderly habits of hygiene and health.

PUBLIC HEALTH IN THE UNITED STATES.

UNDER the sanitary impulse which has recently obtained in the United States, Act seems to follow Act from Congress with almost startling rapidity. Scarcely have we had time to digest one Act to prevent the introduction of infectious diseases into the United States (the second with this title) and to establish a General Board of Health (March 3rd, 1879), than another (a third) Act appears having a title similar to the first part of that of the previous Act. A copy of the last promulgated Act was published in the *Gazette* of the 27th ult. It is designed to control the sanitary condition of American vessels leaving foreign ports, and to subject that condition, and the condition of the passengers and crew, to medical examination on their entrance into a United States port. It imposes upon the consuls of the United States in certain foreign ports, and, in a few

instances, upon medical officers to be attached to the consulates, the duties of certifying as to the sanitary condition of the ships, and upon captains of ships the necessity of having their vessels certified. It makes provision, moreover, for the several maritime States of the union co-operating with the Congressional authorities in the administration of the Act. And, further, it makes provision for weekly reports being transmitted to the National Board of Health from the United States consuls on the state of health, especially with regard to infectious diseases, of the ports within their consular district.

THE TREATMENT OF HÆMORRHAGE IN ABORTION.

THIS important point in practice has recently been very ably discussed before the Medical Society of the State of New York by Dr. W. T. Lusk, professor of obstetrics and diseases of women and children, of the Bellevue Hospital. Dr. Lusk's paper is published in the *New York Medical Record* of March the 8th. The author thinks that the great interest displayed of late in gynæcology has tended somewhat to distract attention from obstetrics. In formulating rules of practice in cases of abortion, he argues against a *laissez faire* treatment, though he admits that a large number of cases of abortion in hospitals and in private practice do well with rest in bed and careful nursing. We can give but a faint idea of the amount of observation, of opinion, of experience, and of advice, which finds apt expression in this admirable paper; but we will give our readers the benefit of the author's conclusions, which are as follows:—

"In the first two months an abortion needs no special treatment. The hæmorrhage of early date are amenable to the same principles of treatment as those from the non-pregnant uterus.

"In the third month no [special] treatment is required when the ovum is expelled with intact membranes.

"When the membranes rupture previous to expulsion, and hæmorrhage takes place, immediate removal should be attempted, provided the cervix be sufficiently dilated to admit the index finger. When the cervix is closed the tampon should be tried for twenty-four hours. If the tampon proves ineffective, the cervix should then be dilated with a sponge-tent, and the ovum removed with a finger. The finger should pass up along the side of the uterus across the fundus, and complete the circuit of the uterine cavity.

"In cases of neglected abortion, retained portions should be removed by the finger or the curette. When the ovum is decomposed no dilatation of the os is usually necessary. When the ovum is fresh the preliminary use of sponge-tents is usually demanded if manual delivery is resorted to.

"Fibrinous polypi, when situated near the os internum—a rare occurrence indeed,—arrest the involution of the lower portion of the uterus. The os is therefore open as a rule, and permits the passage of the finger. When the polypus is attached to the fundus the cervix is usually closed. Small, smooth, slippery bodies, like fibrinous polypi, are rarely to be detached unless the finger operates from above, so that the choice of hands depends on the side to which the polypus is attached.

"In immature deliveries [fourth to seventh month] hæmorrhage can usually be controlled without the tampon by compression of the uterus, and in cases of delay by the manual extraction of the placenta."

Dr. Lusk insists on the essentials of a good tampon; first, that it be carefully packed round the cervix uteri, and fill out the more dilatable upper portion of the vagina, which can only be done by the help of a speculum. He uses Marion Sims's to retract the perineum. He soaks cotton wool in carbolised water (thirty grains to an ounce). Then, after pressing out any excess of fluid from the carbolised cotton, he forms from this a number of flattened discs about the size of a trade dollar, which he introduces with dressing forceps through the speculum. The attachment of the pieces of cotton to a piece of twine, after the manner of the tail of a kite, facilitates removal. The cotton should not be left in for more than twelve hours, and the vagina should be washed out before and after its use. In the discussion which followed Dr. Fordyce Barker made some important observations. He declared that he had seen more deaths from hæmorrhageal abortions than at the time of full pregnancy, and many more in which health was permanently impaired by such hæmorrhage, often continuing for weeks or months after abortion has occurred. Occasionally even in early abortions, though rarely, decided treatment becomes necessary. He spoke strongly of one resource in profuse hæmorrhage in early abortions which had not been alluded to by Dr. Lusk—injections into the vagina of a large quantity of hot water from 104° to 110° F. "I believe," he said, "that one may always be sure that this will positively, absolutely, and efficiently arrest the hæmorrhage. In all the cases where I have resorted to this method I have never found it neccessary afterwards to subject the patient to manipulations for removal of the ovum. It has always come away spontaneously, sometimes the next day, or the next day but one, and absolutely without hæmorrhage." In the matter of the tampon, Dr. Barker said he never trusted to a mere vaginal tampon, but always tamponed the cervix uteri with a compressed sponge of proper size, and then filled the vagina sufficiently to keep that in its place for from eight to twelve hours, when the ovum can generally be removed by the finger.

CONVALESCENT HOMES.

MR. GEORGE F. ADLEY writes to the *Record* to draw attention to the great need which exists for convalescent homes in which the poor who have been smitten by sickness may recover their strength before returning to their miserable residences. "The subject," he says, "has long exercised my mind, and more recently in connexion with a mission in a poor district where nine mothers belonging to the mother's meeting reside in one house—a whole family in each room. Imagine sickness in one of these families—all sleeping, cooking, washing, 'living' in one room. Even where the patient is removed to a hospital, he must return enfeebled and emaciated, needing fresh air and nourishing food, to the foul air of that one, close, confined, room." This is a matter which has often engaged the attention of philanthropists, and to which we have frequently had occasion to allude in these columns. The existing convalescent homes are occupied mainly by those who have been very dangerously or seriously ill, and it is almost a *sine quâ non* for admission that the applicant should have been an in-patient of one of the great hospitals. Many of the out-patients of our hospitals, however, are really as much in need of fresh country air as the in-patients, for, although their maladies may not have been of so serious a nature, their chance of recovery is quite hopeless in the wretched hovels which so many of them inhabit. We are glad to find that this question is agitating the minds of the clergy, who have every opportunity of bringing it before those members of their congregations who have the inclination and the means of carrying out a philanthropic idea.

VERDICT BY "HEADS OR TAILS."

SINCE it has transpired that the verdict in the case of Mainwaring was arrived at by tossing a copper in the air, and crying "heads or tails," it must follow as a matter of course that the Home Secretary reprieves the prisoner and commutes his sentence. Even though the law is, rightly or wrongly, clear as to the responsibility of persons committing crimes when under the influence of intoxication, this case is peculiar, and the scandal of the proceedings attending the finding of the jury would make a new scandal if the condemned man were hung. We are not Abolitionists, but if

the death penalty is to be retained in our code it will be indispensable that it shall be judicially imposed and solemnly executed. We question whether the discreditable farce attending the verdict on Mainwaring is not as great a crime as that for which he is left to die. Parliament must be strangely engrossed with trifles if these grave matters of social prudence escape serious attention.

SIR WILLIAM JENNER.

SIR WILLIAM JENNER has been absent from London during the past four weeks. A little more than a month since he began to suffer from severe cough, which, to the astonishment of himself and his medical friends, proved to be whooping-cough. He saw no patients after he knew the nature of his disease, and in a day or two left London in order that he might not spread the disease. He will not, we believe, return to London till the middle of September, by which time as the fits of coughing are very much less severe and less frequent than they were, he will have been well long enough to be free from the risk of communicating the disease. Although the fits have been fully developed there has never been any bronchitis or other chest complication, and were it not for the danger of infecting others he would be in London discharging his ordinary professional duties.

THE CHOLERA.

THE interest of the public in the recent outbreak of cholera in Northern India has been so concentrated upon the forces engaged in Afghanistan and the north-western frontier in their relation to the epidemic, that the more general bearing of the subject has been largely lost sight of. Now that we are assured that the returning troops have become for the most part free from the disease, and that recent rumours of its ravages among the 10th Hussars and 17th Regiment are incorrect, we can direct attention to another phase of the question. The reported appearance of cholera in Cabul in July gives rise to a fear that the northward extension of the disease has not ended. Towards the close of 1877 cholera spread to the Perso-Afghan frontier, a continuation, as it appeared, of the epidemic of 1875–76 in India, and for some time it was dreaded that we were upon the eve of another great migration of the disease beyond the boundaries of India to the north-west. The alarm, with the exception of an extension into Western Arabia, proved groundless. Already rumours have been afloat that cholera had already, in the present extension, not only spread to the Persian frontier, but that it had also passed the frontier into Persia. These rumours have not been confirmed, but having regard to the beginning of the present outbreak at Hurdwar, and its subsequent wide spread in Northern India and the countries immediately beyond, it is clear that a further spread is well within the region of probability.

THE VENTILATION OF SEWERS.

WE have frequently pointed out the unwisdom of continuing to construct sewers with ventilators that open on the level of the road, and, as a matter of course, in close proximity to houses. This was specially referred to by our Commissioner some two years ago, in criticising the sanitary arrangements of Ventnor, and our remarks then made receive ample confirmation in the fifth annual report of Dr. Charles Kelly, Professor of Hygiene at King's College, and medical officer of health to the combined sanitary district of West Sussex. Dr. Kelly, in explaining the plan of drainage adopted at Steyning, remarks upon the special advantages of the separate system, which, as we have frequently remarked, is by far the best plan of drainage with, at all events, a limited population. But he finds this one disadvantage, that in places where there is no regular public water-supply there is a difficulty in providing for regular flushing. This contingency in the case of Steyning has been met, but again the officer found that the system of road ventilation obtained, and that, as a direct consequence, the details of which are very concisely given, but need not be specified here, cases of enteric fever and diphtheria occurred in the houses nearest to which these ventilators opened. "In the middle of the town, and at the highest point of the sewer, there was a ventilator through which foul gases came, and at times, when the wind blew towards the adjacent house, the inmates found it unbearable." In this house all the children had diphtheria, and some others had sore throats, and none occurred after the ventilation was altered, the alteration consisting in the now recognised plan of leading a pipe along the nearest wall up from the sewer to the highest point that can be reached. Three pages of Dr. Kelly's very brief report are occupied by categorical particulars as to this road-sewer ventilation, and we commend it to the special attention of medical officers of health, because we think that by this sufficient "chapter and verse" proofs are now collected to show that these surface ventilators, with or without their charcoal trays, are of themselves nuisances, and should be abolished in all inhabited districts.

PRIVATE EXECUTIONS.

THE *Echo* is fully justified in the war it is waging against private and unattested executions. Not the slightest public weight or value can attach to official testimony as to the manner in which the last penalty of the law is carried out. There must be some guarantee that the "duty" of strangling a fellow-creature is performed decorously, and with such regard to humanity as the conditions admit. It will be little short of a scandal if attention is not called to this matter in the House of Commons before Parliament is prorogued, and an assurance obtained that the autocratic decree of the Home Secretary empowering sheriffs to exclude reporters will be withdrawn. We do not say that the practice of torture has been revived, but there is no security that it may not be at any moment and in any case, when the feelings of a Home Secretary—or judge—anxious to be relieved of responsibility by the "confession" of a prisoner are unduly considered.

THE CONTROL AND CURE OF HABITUAL DRUNKARDS.

THE Society for promoting the above urgent and laudable object has had its annual meeting under the presidency of Lord Shaftesbury. The second annual report congratulates the Society on the passing of Dr. Cameron's Bill, admitting that the Habitual Drunkards Act, being permissive in character, does not quite come up to the expectations of the committee. Neither does it to ours, as we have already said. To permit drunkards to confine themselves is absurd. We hope much from the earnestness of the promoters of this legislation, but expect very little from what they have as yet received from the legislature. The Habitual Drunkards Act seems to us to show a miserable want of legislative power.

DIPHTHERIA.

A REPORT has been issued by the Local Government Board of an inquiry made under the Board's instructions, by Dr. Wm. Ogle, relative to a fatal outbreak of diphtheria in the rural sanitary district of Barnstaple. The outbreak occurred among some thirty cottages and farmhouses in the parish of Swimbridge, separated from the village of that name, and scattered in small groups or as isolated dwellings over a considerable area of elevated ground. Here, between Oct. 7th and Nov. 8th, 1878, fourteen cases of diphtheria occurred, of which no less than six were fatal. Two of the patients

were adults, the remainder were children of from three to ten years of age. The source of the outbreak escaped detection, and, except that infection played a manifest part in the dissemination of the disease when once it was established, nothing positive was made out as to its development. The report, however, is highly instructive as suggesting lines of further inquiry.

ON THE EXISTENCE OF PROTAGON IN THE BRAIN.

THE substance discovered by Dr. Oscar Liebreich in 1865, which he called protagen, and which he considered to be a new proximate principle, has been the subject of much dispute. By Diaconow, Hoppe Leyler, and Thudichum it has been denied to be a definite substance, but a mechanical admixture of a phosphorised body termed lecithin with a nitrogenous non-phosphorised body called cerebrin, and they state that a portion of the phosphorus can be removed by repeated extraction with ether. According to Liebreich protagen is a white non-hygroscopic substance, which by suitable treatment could be obtained in a crystalline form. Now, cerebrin is described by Hoppe Leyler as a light white, highly hygroscopic powder, and lecithin by Diaconow as a non-pulverisable, yellowish-white, highly hygroscopic body. Thus these two usually amorphous, highly hygroscopic bodies, according to these observers, give rise to a constantly crystallisable, absolutely non-hygroscopic substance. Professor Arthur Gamgee, in a paper read at the Royal Society, June 19th, communicated some observations that go far to settle the vexed question as to the definite nature of the body. In a preliminary investigation undertaken in the physiological laboratory of Owens College, Manchester, it was found that by employing Liebreich's process there could always be obtained a body having the physical properties of protagen, and containing phosphorus in a proportion sufficiently near to that indicated by him; and it was also found that the amount of phosphorus in specimens of protagon which had been crystallised from alcohol four or five times was not smaller than that present in protagen which had only once been crystallised, though a thorough treatment with ether preceded each recrystallisation. A further examination was then instituted to determine not merely the amount of phosphorus, but also that of the other elements present in it. From the result of these analyses Professor Gamgee deduces for protagen the empirical formula—

$$C_{160}H_{308}N_5PO_{35};$$

and he has no doubt of the definite and, within certain limits, stable character of this substance.

AIR-SPACE IN COW-SHEDS.

THE regulations of the Metropolitan Board of Works as to cow-sheds fix an "air-space" of 800 cubit feet per cow, no height of shed above sixteen feet to be reckoned in measuring the space. At a recent meeting of the Dairymen's Association it was decided to memorialize the Board to reduce the "air-space" to 600 cubit-feet. We trust that the Board will refuse to accede to this memorial. Eight hundred cubic-feet of air-space per cow, represents the result of careful inquiry, confirmed by observation, of the minimum air-space which should be given to each cow in a shed, if the health of the animal is to be fully maintained.

THE DEATH OF PACE.

THE suicide of Pace can scarcely be regarded as an unforeseen occurrence. Had this poor man been an inmate of any one of the abused lunatic asylums against which it is so much the fashion just now to inveigh, he would have been placed under proper surveillance as a person likely to make an attempt on his life. It is, perhaps, unreasonable to expect that the authorities of prisons will exercise ordinary care in the custody of prisoners confined for grave offences, more particularly now that they are under central control. Nevertheless, looking to the fact that Pace was convicted of a crime amounting to murder, and that he was "terribly provoked," it would have been natural to see that the means of self-destruction were removed when he was left alone with his own embittered and desponding self-consciousness. Grave responsibility rests somewhere, and, setting aside the view taken by the coroner's jury, we cannot hold the governor and officials of the prison free from moral blame. The case throughout has been most deplorable, and it points strongly to the urgent need of a law to avenge the crime against humanity which Pace suffered for resenting—a little too impulsively perhaps.

THE PLAGUE.

THE August number of the Proceedings of the Royal Geographical Society contains a paper by a member of the China Inland Mission, Mr. J. McCarthy, giving an account of a journey he made across China from Chin-Kiang to Bhamo, in 1877, and which contains some brief, but interesting references to the "plague," which prevailed in Western Yunnan that year. Leaving Yung-Chang, and approaching the valley of Talween, Mr. McCarthy became anxious for his men on account of the reports they had received of illness prevalent in that locality. These reports appear to have been so alarming as of themselves, according to Mr. McCarthy, to predispose to sickness; and the appearance of the hills around Pa-piao was anything but reassuring. "Laid out on the sides of the hills over which we passed," he writes, "we saw hundreds of new coffins, containing the bodies of those who died of plague. In the road also tables, chairs, and stools were thrown about in a most extraordinary way, the explanation being that this terrible plague had been raging for months (it was said to be common to the district), so that even the furniture of infected houses was ejected by the terrified survivors. Many of the people were camping out on the hills, the officer in charge himself being in a temple on an adjacent hill."

TRICHINOSIS.

THE *Cambridge Chronicle* gives an extract from a report by Dr. Armistead, the medical officer of health to the Dunmow rural sanitary authority, relative to an assumed outbreak of trichinosis at Thaxted, following upon the consumption of certain sausages. Fifty-two persons appear to have eaten of them, and of these forty-four suffered from "symptoms of irritant poisoning," and three others were slightly ill. Outbreaks of this sort are extremely rare (we recall only one such) in England, and we shall look with interest for a detailed account of the outbreak.

THE EDINBURGH UNIVERSITY CLUB.

IT is customary for the members of this club to dine on the evening of graduation-day, and to drink the health of the new Graduates as well as of their *alma mater*. The custom was well sustained on the evening of Friday last. Dr. George Harley presided. Sir Charles Tupper, of Canada, a graduate of Edinburgh, and a distinguished Canadian politician, returned thanks for the visitors.

THE RED CROSS IN CENTRAL ASIA.

THE Russian Red Cross Society is already in active work with the expeditionary force which has commenced operations, under General Lazarw, on the eastern coast of the Caspian. The detachment of the Society is under M. Saradjew, and it consists of nine sick-attendants who had

served in the Russo-Turkish war. It is well supplied with medical and surgical stores and "comforts," and has already established a hospital for six hundred sick, which on the 28th June had already received eighty patients, chiefly suffering from dysentery and diseases of the eye.

LETTERS from Candahar, dated June 27th, state that "The nights have been delightfully cool; this morning was quite cold. The direct rays of the sun feel very powerful in the daytime, the more so as the wind is generally dry and cool, although we have had occasional hot winds coming from the desert to our south-west. Fevers, chiefly periodic, and liver derangements, are prevailing diseases. The type of the former does not appear to be so severe, the head symptoms being less marked. Cholera, which has been seen at Dadur and Quetta, has broken out among the native camp followers in the fort. The old soap factory has been used as a hospital by Surgeon-Major Cunningham, 15th Sikhs, placed in medical charge. Up to date there have been eight cases—two fatal, two discharged, four under treatment. 'They are,' Dr. Cunningham writes, 'not so severe as we usually see at the beginning of a great epidemic, and I have great hopes that we may escape with a comparatively slight visitation.'"

AT the Nottingham Summer Assizes, Sarah Ann Sanderson, aged fifty, midwife, has been proved guilty of murder. She had attempted to procure abortion in a widow for the sum of two guineas. For this purpose she seems to have used knitting-pins, and caused a wound of the uterus extending into the intestine, producing extensive peritonitis. Death followed about twelve days after the midwife's interference.

A FACULTY OF MEDICINE, in connexion with the Nevo University, Russia, is to be established at Odessa.

THE BRITISH MEDICAL ASSOCIATION.

(From our Correspondent.)

Cork, Tuesday, August 5th.

THE forty-seventh annual meeting of the British Medical Association was opened to-day at Cork. This is the second occasion on which the Association has visited Ireland, the first being twelve years ago, when a meeting was held at Dublin under the presidency of the late Dr. Stokes. On the present occasion the whole of the business of the Association is to take place in the Queen's College, a fine range of buildings admirably adapted for the purposes to which it will this week be devoted. The Queen's College stands on an eminence about half a mile to the west of the city; in the midst of very extensive and well-planned grounds, which have been only recently laid out. No pains have been spared by the authorities to render the meeting in every way a successful and memorable one, for both the Reception Committee and the Corporation of the city of Cork have prepared a series of entertainments for their guests. Thus this evening the members are invited to a *conversazione* given by the Reception Committee at the Queen's College; to-morrow (Wednesday) there is a *conversazione* by the Mayor, Corporation, and citizens of Cork; on the 8th a garden party in the afternoon, followed by a concert in the evening. When to these proceedings are added the public dinner on the 7th, a luncheon given by Mr. and Mrs. Pike at Besborough, and other entertainments, it will be seen that the social side of the meeting is by no means neglected.

Several members arrived in Cork yesterday, and spent the time in visiting some places of interest in the neighbourhood —such as the harbour and Queenstown, Blarney Castle, and the excellent hydropathic institution at St. Ann's Hill. At the time of writing upwards of 300 members have entered their names. Many distinguished visitors have already arrived, including Professor Charcot, Drs. Guéneau de Mussy, Gallard, Ball, and Bonnafonte of Paris, Drs. Martin, Weber-Lich, and Hirschberg of Berlin, Dr. Pacchiotti of Turin, Drs. Sayre and Seguin of New York, Drs. Turnbull and Da Costa of Philadelphia, and others. The sections which meet to-morrow are presided over by the following gentlemen:—Section A, *Medicine:* Dr. Andrew Clark. B, *Surgery:* Professor W. K. Tanner. C, *Obstetric Medicine:* Dr. G. H. Kidd. D, *Public Medicine:* Dr. T. W. Grimshaw. E, *Psychology:* Dr. G. A. Eames. F, *Physiology:* Mr. Henry Power. There are also two subsections, one on Ophthalmology and Otology in the Surgical section, under the chairmanship of Mr. Jonathan Hutchinson, and one on Dermatology in the Medical section, under Professor McCall Anderson. Everything promises for the meeting to be a most successful one.

The proceedings to-day commenced with meetings of the Council and of the Committee of Council in the morning; and in the afternoon the first general meeting was held in the Examination Hall, the president, Dr. Falconer, in the chair. After the minutes had been read and confirmed, Dr. Falconer resigned his chair to the incoming president, Dr. Denis O'Connor, Senior Physician to the Cork Hospital, and Professor of Medicine at Queen's College. In his remarks he referred to the previous meeting of the Association in Ireland, to the growth of the Association since that time, and more especially to the work done by it during the past year, in promoting scientific research in the cause of medical reform, and the part played by it in furthering the Habitual Drunkards Bill. He also referred to the fact, that the Council had resolved to award the gold medal of the Association to Surgeon-Major Reynolds, for his gallant conduct at Rorke's Drift, and mentioned this with peculiar pleasure, owing to the fact that Surgeon-Major Reynolds was a native of the Emerald Isle. He then introduced the president elect, who is the senior professor at Queen's College, and stated how high was the estimation in which he was held. Dr. O'Connor having taken the chair, the proceedings were agreeably diversified by the announcement by Dr. Sullivan, the Principal of the Queen's College, Cork, speaking on behalf of the Senate of the Queen's University, Dublin, of the intention of that body to confer the honorary degree of M.D. upon the retiring and incoming presidents of the Association, as a mode of signalising the occasion upon which the Association had first availed itself of meeting in one of the colleges of the University. Dr. Waters (of Chester), in a eulogistic speech, then proposed a vote of thanks to Dr. R. W. Falconer, for the manner in which he had performed the duties of his office during the past year. This was seconded by Dr. Alfred Carpenter, and carried by acclamation.

The PRESIDENT (Dr. O'Connor) then proceeded to deliver an address. After a few words of reference to the previous meeting of the Association in Ireland, under the presidency of Dr. Stokes, he proceeded to follow the example of several of his predecessors by making some remarks upon the locality in which the Association had now met. He pointed out that the sanitary condition of Cork was much improved of late years, as evidenced by the lessened death-rate, the disappearance of typhus fever, &c.—improvements due to the admirable works undertaken by the Corporation for the water-supply and sewerage. Speaking of the institutions of Cork, he mentioned that in the eighth century, only a short distance from the site of the Queen's College, there existed a monastic college, one of the earliest and most important in the land. He showed that Cork had again during the last half century re-assumed its educational character, which it had so long ago possessed; for now the population were taxed to maintain a school of design and a musical academy, and there were national educational establishments in large numbers. Again, in asylums and hospitals Cork had also in recent years received many acquisitions. Dr. O'Connor than dwelt at some length upon the objects of the Association, in furthering the common brotherhood of the profession, and in advancing medical knowledge. He spoke of the mutual advantages enjoyed by the practical physician and the scientist, the work of each aiding the end each had in view, the establishment of a rational basis for the treatment of disease. He also referred to the high place occupied by hygiene, general and personal, and concluded with some remarks upon the influence such meetings as these must have upon members of the profession generally. He expressed great satisfaction with the readiness and heartiness with which the profession

and the citizens of Cork had entered into the reception of the Association, and eulogised the labours of Professor Macnaughton Jones, with whom had originated the idea of inviting the Association to Cork, and who for the past six months had laboured indefatigably to make the meeting a successful one.

DR. ALFRED CARPENTER (President of Council) then read the report of the Council for 1878-9. The report mentioned that the number of members admitted during the year was 650,—the total number now on the register being 7810. Amongst other topics mentioned was the award of the Association Medal to Surgeon-Major Reynolds, the work of the Habitual Drunkards Committee, and of the Committee on Hospital Out-patient Reform—from which a report would be presented to the meeting. The Medical Reform Committee under the chairmanship of Dr. Waters would also present a report; and the Parliamentary Bills Committee also received due notice. The financial statement was appended and proved highly satisfactory.

DR. GRIMSHAW of Dublin moved and MR. COOPER FORSTER seconded the adoption of the report, which was carried unanimously, after a brief protest by a member upon some recent editorial notice in the journal in relation to private lunatic asylums.

Wednesday, August 6th.

The reception by the President of the Association and the Local Reception Committee took place last evening at Queen's College. There were about two thousand visitors present, and the affair was a very brilliant one. The grounds and buildings were illuminated throughout with the electric light on the Jablochkoff system—and some excellent music was furnished by two military bands—one stationed in the gallery in the large examination hall, and the other in the library. A lecture was given in the course of the evening by M. Berly upon the process of electric lighting.

This morning Dr. Sayre of New York gave a demonstration on Hip Disease before a crowded and enthusiastic audience.

The business of the day includes an Address in Medicine by Dr. Alfred Hudson, Regius Professor of Medicine in the University of Dublin, and at two o'clock the meeting of the several sections. In the Medical section the subject for discussion is "on the value of Mountain Air in the Treatment of Phthisis," by Drs. Henry Bennett, Clifford Allbutt, and Berkart. In the Surgery section a discussion upon the diagnosis and treatment of Joint Diseases will be opened by Dr. Sayre of New York; in the Obstetric section a discussion takes place on Intra-uterine Medication, opened by Dr. Playfair; in the section on Public Medicine, a discussion will be opened by Dr. Andrew Fergus "On the Influence of Drinking-water in originating or propagating Enteric Fever, Diarrhœa, Diphtheria, and Scarlatina"; in the Psychology section a debate on the prevention of Insanity will be held. There is no special subject for discussion in the section of Physiology, but here, as in the other sections, an address will be given by the President at the commencement of the proceedings.

PAYING PATIENTS AT ST. THOMAS'S HOSPITAL.

THE following is a memorandum by Mr. Simon on the present state of the question as to the reception of paying patients in the hospital.

1. The House Committee have carefully considered the question of appropriating for a time a part of the hospital to the reception of remunerative paying patients. It may be taken for granted that the project would not have been entertained except with a view to the making of substantial pecuniary profits, which might considerably relieve the funds of the hospital in their present depressed state; and the main point for the committee has therefore been to see what would be the value of the proposed undertaking considered as a commercial enterprise.

It seems clear that block No. 2 of the hospital buildings could be appropriated for a time to the purpose of the undertaking without any inconvenience to the general service of the charity; that this block could be made ready for the reception of the patients at a cost which is estimated at £500; that it would then be capable of accommodating on its four floors a total of seventy-six ordinary and three special patients, each of the seventy-six ordinary patients to have a separate sleeping compartment, with joint use of a day-room common to him with other patients of the same floor, and each of the three special patients to have a room entirely to himself.

Taking that constitution of the block, and rating the payments of patients at 8s. per diem for each ordinary patient, and 12s. per diem for each special patient, and assuming all the beds of the block to be occupied throughout the whole year, the earning capacity of the block may be stated at £11,753; while, on the other hand, the expense of the block for all ordinary house-keeping purposes and for medical attendance and nursing, with patients' diet and wine taken at £38 a head, would, according to the treasurer's estimates, be about £7000; to which there would have to be added the ordinary costs of commercial enterprise in respect of management and advertising; costs, which could not be rated low in the present case, where an entirely new sort of business would have to be managed, and to be brought under notice of the public. If the entire expenditure on account of the block were to amount even to £8000 a year, and a balance of but £3753 were left transferable to the funds of the charity, no doubt the undertaking might be said to have answered the purpose for which it was begun.

It is, however, only in a very limited sense that we can attach importance to such figures as the above. They do, indeed, show, as mere matter of arithmetic, that, supposing every bed in the block to be occupied for every day in the year, profit, up to a limit of perhaps £4000 or more, is in theory possible; but they do not assist the Committee to judge whether the undertaking could in fact realise any notable fraction of that profit.

The Committee have no adequate means of judging what demand there exists on the part of the public for such accommodation as the scheme would supply, and are not, in my opinion, entitled to assume that the proposed accommodation would be freely marketable at the proposed price. Supposing it to be so, then, as it became known to the public, part after part of the block might be taken into profitable use; but it is certain that an interval of time must elapse before the undertaking could even pay its first expenses, and it seems not improbable that, even with fairly favourable progress, at least two years might elapse without there being any sensible profit to show. When at last the whole block had come into working, there would always be a large proportionate waste from the non-occupation of beds; and I should myself think it sanguine to estimate that, even with the whole block working, the annual profit on the seventy-nine beds would reach two-thirds of the theoretical maximum. Finally, the possibility must be regarded, that on trial there might be found but a very small class of persons disposed to pay eight, or even seven or six, shillings a day for the accommodation which the hospital could offer them; and that the undertaking might for this reason have to be abandoned after proceedings which would have cost us both money and labour.

In view of these considerations, I should myself greatly hesitate as to the expediency of the undertaking. The matter presents itself to my mind as one of a purely commercial sort, well adapted for private enterprise, but utterly uncongenial with the present functions of the governors of the hospital: and it would, in my opinion, be a most serious addition to the responsibilities of the Grand Committee that they should undertake to supervise the working of a new, and necessarily uncertain, commercial venture. If the Grand Committee, with the facts and estimates before them, should resolve to enter on the undertaking, it would of course be the duty of the House Committee to do whatever they can to make the undertaking a success; but my suggestion would be, that the House Committee should not take upon themselves the responsibility of recommending the undertaking.

2. With regard to paying patients of a poorer class, suggestions have been made to the following effect:—That considerable numbers of the sick (or their friends for them), though not able to pay prices which would yield profit to the hospital, are able, and would be willing, to secure the hospital, wholly or in main part, against the cost of their hospital treatment; and that provision might properly be made for this class of paying patients by receiving a certain number of them into the common wards of the hospital, where they should be distributed among the ordinary (not paying) patients, and be treated precisely as these are, in all

respects of diet, nursing, medical attendance, ward-discipline, and obedience to the rules and regulations of the hospital.

The suggestions which have been made for the reception of poor paying patients are apparently not of quite identical intention as regards the medical quality of the cases to which the plan should apply; those of Mr. Bonham Carter seeming to intend that the poor paying patients should not in any medical respect be of different sort from the not-paying patients around them; while those of Dr. Bristowe seem, at least in part, to contemplate that the paying class should consist of cases which, in a medical sense, would be ineligible, or comparatively ineligible, for admission without payment.

If it be meant (as Mr. Bonham Carter seems to mean) that the paying patients would be without medical difference from the others, the suggestion cannot be deemed complete till it shall explain on what principle the hospital is to expect payment from these patients. As no rule is proposed that patients who can afford to pay shall be made to pay, and as apparently the only alternative to such a rule would be that we trust to the working of each individual patient's good-will, it is supposed that patients seeking to come into the hospital, but not allowed any priority of admission, nor to be allowed after admission any privilege as to keep or indulgencies, will, in any considerable number, be ready of mere good-will to ask for admission as paying, rather than not-paying, patients? If this be the supposition, it is not, in my opinion, one on which we could well rely as an expectation to improve the resources of the hospital. Much might no doubt be said in favour of a rule, that every patient coming into the hospital should be required to pay the cost of his treatment unless he could prove his inability to do so; but no such rule could be enforced except with very extensive machinery to investigate the facts of the particular cases—machinery, which can hardly be conceived as existing except through the concert of all the chief medical charities of London; and the separate endeavour of any one hospital to enforce such a rule, either in regard of all its applicants or in regard of certain classes of them, would merely send the applicants to other hospitals with more accommodating rules of admission.

A system that paying patients, not differing in a medical sense from the other patients, should be received in certain quantity into the common wards of the hospital, would be open to the very serious objection that it would tend to make an invidious distinction in each ward as between higher-class and lower-class patients, and might but too easily derange that perfect impartiality of administration which is among the hospital's first duties to all who become its inmates. The objection to the arrangement would no doubt be in some degree less if the paying patients were only of such medical sorts as hospitals in general would not receive or retain; but even with this qualification the objection would not quite cease; and supposing it intended that certain sorts of illness should not have hospital treatment except on the basis of their paying for it, probably the only unobjectionable way of giving effect to this intention would be to appropriate a distinct section of the hospital to that particular sort of service.

Most hospitals have a rule, which probably few of them observe with any degree of strictness, but which evidently is of excellent intention with a view to extend the services of the hospital to the greatest quantity of real cure, that the stay of individual cases in hospital shall be limited, and perhaps that certain chronic cases, classed as incurable or of indefinitely long duration, shall not be admitted to the wards. In proportion as a hospital is of scanty means, and particularly if it has to meet the requirements of a medical school, it may be obliged to give more rigorous effect to some such rule as the above, either by absolutely excluding certain cases, or by requiring that payment shall be made for them. If our financial position is such that we ought to adopt that rigorous course, and if it is likely that for some years to come a considerable part of the hospital buildings must remain unemployed for the ordinary purposes of the charity, probably the course in which we might best apply such suggestions as Mr. Bonham Carter and Dr. Bristowe have made, and in which we should least deviate from the spirit of our foundation, would be that we temporarily converted one of our blocks into a self-supporting asylum for such cases as are referred to. I may confess that I should not only deplore the necessity, but should feel it a deep humiliation for the hospital, that it must lower the flag under which it has worked for so many centuries, and must in any degree alter the relation in which it has hitherto stood to the poverty and physical sufferings of the people of London. It is a course which I think ought not to be taken on account of any merely transient embarrassment, nor unless, looking forward for some years, we can fairly regard it as imposed on us by necessity.

3. My impressions, then, are not on the whole very clearly in favour of either of the expedients which have been proposed. Should either of them be adopted, I would of course gladly do anything I could to contribute with others to its success. But I believe that our better course would be to make a well-considered and well-sustained appeal to the public to relieve the hospital from its encumbrance of debt. Without question, we have a really strong case for such an appeal, and I believe that, if we brought it forward deliberately and with our best strength, we should within a year or two have raised the full amount—say £100,000—which we need to reinstate the hospital in thorough prosperity. The present season is, perhaps, too advanced for this to be the best moment for us to appear before the public for such a purpose; but the purpose would require much preparation, and my notion would be that public action in the matter might, with no disadvantage, be deferred till the autumn.

There is action on a smaller scale which might, I think, at any moment be taken with advantage, and which, though not of the nature of a rule for payment by any patient, would perhaps appeal with some effects to the patients who are described as "able and willing" to pay. This would be that, on a notice-board to be set up in each ward, there should be some sort of short printed address to the patients, briefly explaining the circumstance under which the hospital is in want of funds; stating the belief of the governors that, among the patients who receive benefit from the charity, there are many who, either personally or by their friends, could afford to repay to the hospital all costs incurred on their account; and reminding such patients that, by taking the suggested course, they might importantly assist the hospital to extend to others the benefits which they have themselves received.

June 11th, 1879. J. S.

HEALTH OF LARGE ENGLISH TOWNS

IN THE THIRTY-FIRST WEEK OF 1879.

In twenty of the largest English towns 4902 births and 2590 deaths were registered during last week. The births were 190, and the deaths so many as 780, below the average weekly numbers during 1878. The deaths showed, however, a further increase of 101 upon the exceptionally low numbers returned in recent weeks. The annual rate of mortality per 1000 persons living, which had been so low as 17·1 and 17·6 in the two preceding weeks, further rose to 18·3 last week. During the past five weeks of the current quarter the annual death-rate in those towns has averaged only 17·7 per 1000, against 23·5 in the corresponding periods of the three years 1876-7-8. The lowest death-rates in these twenty towns last week were—11·9 in Portsmouth, 13·7 in Bristol, 15·4 in Nottingham, and 15·5 in Sunderland. The rates in the other towns ranged upwards to 19·4 in London, 20·2 in Wolverhampton, 21·1 in Oldham, and 21·1 in Plymouth. The deaths referred to the seven principal zymotic diseases in the twenty towns further rose to 413 last week, from 348 and 364 in the two previous weeks. They included 92 from scarlet fever, 112 from measles, 80 from whooping-cough, and 28 from fever, principally enteric. The annual death-rate from these seven diseases averaged 2·9 per 1000 last week; whereas it did not exceed 1·2 both in Portsmouth and in Nottingham, it ranged upwards to 3·3 in Oldham and Leeds, and 3·7 in Bristol. The high zymotic death-rate in Bristol was due to the fatality of whooping-cough. The fatal cases of measles were proportionally most numerous in Bradford and Leeds; and of scarlet fever in Oldham. The zymotic death-rate last week was equal to 3·5 per 1000 in London, whereas it did not exceed 2·4 in the aggregate of the nineteen large provincial towns, the population of which slightly exceeds that of London. Under the influence of the higher temperature last week the return showed an increased fatality of diarrhœa; only 86 deaths were, however, referred to this cause during the week, in the twenty towns, against 951, 804, and 1159,

in the corresponding weeks of the three years 1876-7-8. Small-pox caused five more deaths in London and its outer ring of suburban districts, and one in Nottingham; but no fatal case was recorded in any of the eighteen other large provincial towns. The number of small-pox patients in the metropolitan asylum hospitals, which had declined from 190 to 113 in the four preceding weeks, further fell to 108 on Saturday last; 18 new cases of small-pox were admitted to these hospitals during last week, against 17 and 20 in the two previous weeks. The Highgate Small-pox Hospital contained 8 patients on Saturday last.

ROYAL COLLEGE OF SURGEONS.

THE Council of the College met on the 7th instant; the President in the chair. The attendance of members was unusually small. The Council, with considerable regret, were called upon to accept the resignation of Dr. Sieveking as Examiner in Medicine, by reason of his being Senior Censor at the College of Physicians, and that of Mr. Erichsen as an Examiner in Surgery. The resolution recently passed by the Medical Council, requesting the Council of the College to reconsider its determination not to admit to the examination for L.D.S., *sine curriculo*, all those who began the study or practice of dentistry previous to the passing of the Dentists Act (1878), was read. Its consideration was postponed until the meeting in October.

A communication was received from the Registrar of the Medical Council, requesting to know, for the information of the Select Committee of the House of Commons, whether the regulations of the Council of the College were in conformity with those of the Medical Council. The Secretary was instructed to give an early reply.

Notices of motion were given by Mr. Hancock and Mr. Holmes, and the Council adjourned to the quarterly meeting on October 17th.

THE ARMY MEDICAL SCHOOL AT NETLEY.

THE summer session of the Army Medical School terminated on the 4th inst. It was attended by nine candidates for the medical service of the Royal Navy, fourteen for the Indian medical service, and several commissioned medical officers on leave of absence from India. We print elsewhere the names of the candidates who were successful in the final examination at the school and the number of marks gained by each. The military secretary to the Secretary of State for India in Council, Colonel Allen Johnson, came from London to deliver the prizes in the gift of the school. Sir Joseph Fayrer, K.C.S.I., President of the Medical Board of the India Council, Dr. Norman Chevers, late Principal of the Medical College at Calcutta, Surgeon-Major Hopkins of the India Office, and R. Stewart Esq., a former member of the Supreme Council in India, also arrived from London to be present at the meeting, which comprised not only the official staff of the Netley hospital and the professors of the school, but also many visitors from the neighbourhood. All the three prizes in the gift of the school—viz., the Herbert Prize, instituted in memory of Lord Herbert, the founder of the school, and the Martin memorial and Parkes memorial medals—were on this occasion carried off by one and the same gentleman, Mr. F. F. Perry, whose name appears first in the list of candidates for the Indian service. Mr. Perry, to whose eminent abilities and industry universal testimony was given, was educated at University College. He acted both as House-Surgeon and House-Physician at University College Hospital, and was subsequently for some time demonstrator of anatomy at the Westminster Hospital. After interesting addresses had been delivered by Colonel Johnson and Dr. Norman Chevers, the meeting adjourned to the handsome mess-room in the officers' quarters, where Surgeon-General Massy, the principal medical officer, and the officers of the Netley Medical Staff, entertained the visitors at luncheon. Among the latter were Inspector-General W. T. Domville, C.B., R.N., principal medical officer and superintendent of the Royal Hospital at Haslar, whom report points to as the future Director-General of the medical department of the navy, Surgeon-General T. Best, principal medical officer at Portsmouth, with other naval and military medical officers.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.

THE lecturers in the Edinburgh School of Medicine met on July 29th, 1879, when, *inter alia*, the subject of the Murchison Memorial was brought before them, and there were discussed the terms of competition for the proposed memorial scholarship, when competed for in Edinburgh, as explained in the circular issued by the Memorial Committee—viz., that "in Edinburgh the scholarship will be administered by the Medical Faculty of the University, and be open to all its medical undergraduates." Resolved:—

1. To protest against the unfair and invidious exclusion of the students in this school from participation in the competition for the proposed Murchison Memorial Scholarship, while the students of all the London medical schools are to be permitted to take part in it.

2. To endeavour to get the promoters of the scheme to remove this restriction, and to make and publish the necessary alterations, both as regards the competitors and the judges of the award in Edinburgh.

3. To withhold all countenance and material support from the scheme until such amendments have been made and duly notified.

4. That a copy of these resolutions be sent to the secretaries to the memorial, both in London and Edinburgh, with a request that they be immediately submitted to their respective committees for consideration and adjudication thereon.

5. That a copy of these resolutions be sent to the editors of the various medical journals for publication.

ALEX. KEILLER,
Chairman of Lecturers.

Correspondence.

"Audi alteram partem."

THE TREATMENT OF HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—As cases of hydrophobia are still frequently reported, in some of which the treatment is detailed, but all treatment of the established disease seems useless, I would suggest that some such plan as the following affords at least a possibility of mitigating the sufferings of the patient, and perhaps give time for the disease to run its course, as Dr. Good has suggested, that "it is highly probable that a spontaneous cure may be occasionally effected by the strength of the constitution or the remedial power of nature alone."

It is well known how dry is the mouth, and how clammy and thick are the sputa, increasing towards the termination of the case, and yet how every attempt at swallowing brings on spasm, and almost invariably ejection of the fluid taken into the mouth. It is also known that the water of the blood in hydrophobia is diminished some 20 per 1000 compared to the average of health. These surely point out that if Dr. Good's supposition is correct, that some cases may be cured by keeping patients alive for the time necessary to allow the disease to run its course, our aim should be to supply water, and perhaps nourishment, to the blood, so that it may carry on its functions while the effects of the disease last. The blood cannot be nourished by the stomach, so that we must supply fluid itself through the rectal vessels. As a rule, constipation obtains in this disease, so it would be well that the lower part of the colon should be empty to be used for the supply of fluid.

A large enema of cold or tepid water would effect this, the patient, if necessary, being put under chloroform; then a small flexible tube (a large flexible catheter would answer) should be inserted four or five inches up the rectum, and allowed to remain from time to time, say at intervals of half an hour; a quantity of two or three ounces of water at temperature of 98° should be thrown up slowly, and with scarce perceptible contraction of the india-rubber flask in which it is held. When all is introduced the rectal tube should be plugged, and if possible kept there, for a repetition of the operation in half an hour. The rectum, as a rule, easily tolerates small enemata, and with these any medicines desired could be injected. In the same way, perhaps, alternating with water, injections of Liebig's raw soup should be administered, so as to keep up the strength of the patient; to this may be added wine, or any fluid which would blend with the acid of the soup and pass without digestion into the vessels of the bowel. My own experience points out that aromatic spirit of ammonia almost invariably causes the contraction of the gut and ejection of the fluid thrown up.

I have seen no report of any case or cases treated by continuous small enemata, and as, fortunately, cases for such trials are very rare to individuals, I venture to suggest such a course as not unlikely to be of some service. I am the more tempted to ask a trial of some such plan as that I have indicated, as Mr. Macnamara, surgeon to the Westminster Hospital, told me, when I discussed the matter some years ago with him, that a hydrophobic patient on whom he had tried injections survived longer than any other such patient he had treated; but he told me that injections were not carried out in the systematic way as above proposed. A glance at Majendie's graphic history of the injection of a pint of water into the veins seems also to corroborate the hope that good will result from a fluid supply to the blood. The injection was made with a faulty syringe, so that a dozen bubbles of air also entered. Previous to the injection, venesection of the foot had been put in practice, and, owing to the struggles of the patient, two lancets had been broken, leaving their points transfixed in the internal face of the tibia. Pyemia resulted, and death on the ninth day after the operation. But careful consideration of Majendie's statement shows that the injection did not do away with the disease; for the muscles were agitated at every touch, but the patient was able to eat and drink and discuss his affairs with his friends until pyemia set in, and apparently the fatal issue was caused by this complication arising from the periostitis caused by the broken lancets. (*Vide* Majendie's "Physiologie," tome iii., p. 382, &c.)

Even Majendie's suggestion of injection of fluid into the veins would seem worthy of repetition under chloroform and with modern appliances of antiseptics, improved syringes, &c. The means that I have suggested are at hand with every practitioner, and a few carefully recorded experiments would settle the advantage or the reverse.

Your obedient servant,

Egham Hill, Aug. 4th, 1879. T. M. LOWNDS, M.D.

ON THE SUCCESSFUL TREATMENT OF SPIROCHÆTE OBERMIERI (F. KOHN).

To the Editor of THE LANCET.

SIR,—The active motile threads found in the blood of patients suffering from "typhus recurrens" may, on becoming quiescent, be induced to grow into a delicate branching network, whose constituent fibrils for a time retain the spiral twist, and have been seen to proceed directly from the original parasitic particles during the process of artificial cultivation. Then tufts appear, formed of distinct beaded tubules; these blend, and granular vesicles arise, which finally seem to scatter their contents by rupture.

There can hardly be conceived a more exquisite object for the microscope than that of the first-formed spirillar network or mycelium, which of itself affords ample proof of the plant-nature of the blood-parasite in question.

Not every experiment, however, succeeds equally well; and I consider it a notable fact that the clear serum of infected blood will often prove a suitable medium for the germinal structures which it contains, when submitted to a continuous temperature of about 100° Fahr.

Dr. Koch, of Wollstein, tells me he has already effected the artificial culture of spirochæte up to a certain point, and as other observers in Germany will, doubtless, be following his example now that relapsing fever is again prevalent, I think it well to briefly record what has been accomplished in Bombay in like course.

Yours obediently,

July 1st, 1879. H. V. CARTER, M.D. Lond.

SODIUM ETHYLATE FOR NÆVI.

To the Editor of THE LANCET.

SIR,—A very interesting paper on this caustic alcohol appeared in THE LANCET last year, and it was strongly recommended for the cure of nævi. I had at that time under my care a delicate strumous infant, which had been prematurely born, and had a nævus on its right loin; this was of oval shape, about two inches long, by one inch and a half broad, stood up from the surrounding level half an inch, was of dark purple colour, and had a thin bluish skin over it. I had been thinking of tying it with an ordinary quadruple ligature, but had deferred operation on account of the extreme fragility of the child, and was therefore only too glad to hear of a remedy described as able to "destroy, painlessly, nævi." I sent to London for two ounces, which cost 11*s.*, and got a thickish, tawny-port-coloured, clear fluid, which now is becoming thicker and cloudy, with a fine deposit. The nævus was painted four times with the ethylate, and on the third occasion, as the first two seemed to have given the child much pain, I froze with ether spray; but this frightened or hurt the child also, and the last time I gave chloroform and æther. The patient now got so pale and thin, refused food, and was so fretful, that I desisted from further applications. But the general result is that now, six months after using the caustic alcohol, the nævus is smaller, decidedly flatter, does not grow, and is covered with a fine thin, white, wrinkled, tissue-paper-like skin.

The next case in which I tried it was one of epithelioma covering the inside of the cheek of a woman nearly eighty years old, who had an obstructive aortic murmur. She was pitiably pale, and thin, and weak, and owing to the growth getting between her gums when masticating, could eat nothing solid. I painted the surface thoroughly with sodic ethylate, and was surprised and sorry to be told afterwards that it produced intolerable pain for thirty-six hours. Eventually I froze the growth with ether spray, and shaved it off, and now frequent brushings with a strong solution of perchloride of iron keep it down temporarily, and she can eat well. The iron caustic and strong iodine solution which had been used before she consulted me she describes as "bad enough to bear, but not nearly so punishing as that first stuff you tried." Had I seen her when suffering from the ethylate I should have relieved pain by freezing the part, or by painting it with chloroform.

The next case was a nævus sent from the country, which involved the whole substance of one-half of an infant's lower lip, and which, from its bulk and weight, made the lip hang down, and allowed saliva to constantly dribble over chin and neck, excoriating them. The ethylate has been used four times; it seems to cause little pain, and the nævus is much smaller; indeed, there is no more dribbling from the mouth, and the lip is nearly *in situ*.

It is clear to me we have in this alcohol a useful addition to our means of dealing with "nævi."

I am, &c.,

Melksham, Wilts. S. GROSE, M.D., F.R.C.S. (exam.).

PARIS.

(From our own Correspondent.)

PROFESSOR PAUL BEST has made a further communicated to the Academy of Sciences on the use of compressed nitrous oxide and oxygen for the induction of surgical anæsthesia. Since the account of his experiments was given in THE LANCET (see vol. i., 1879, pp. 355 and 427) modern operations have been performed under the influence of the mixture by M. Péan, and the results have been uniformly satisfactory. In recognition of M. Best's researches

on this subject the University of Edinburgh have awarded him the "Cameron" prize, which is given for the most important discovery in therapeutics made during the year.

M. Tarnier showed a patient at the Academy of Medicine upon whom he had performed the Cæsarian operation by the method of Porro, removing at the same time the uterus and ovaries. The subject, a rachitic woman, aged thirty-six, entered the Maternité Hospital on March 20th. The antero-posterior measurement of the pelvis was six centimetres; but its conformation rendered cephalotripsy impossible, and moreover the os remained undilated, although the membranes had ruptured three days before. The operation was performed with strict antiseptic precautions, and during the convalescence, which took place without a bad symptom, the temperature never rose above 38·6°. The *Ordre* of July 30th contains an article by M. Barré on hospital organisation. Comparing the system of nursing in Paris and London, the author was much struck, on visiting an English hospital by the kindness and efficiency of the nurses, which he contrasts with the ignorance and rapacity of the French *infirmiers*. The greater part of these are convalescents unfit for outside work, who undertake the care of the sick merely as a temporary occupation, which they manage to render fairly profitable by levying black-mail on the patients. Those who are able to pay a few sous daily receive a certain amount of attention, but the unfortunates who have nothing to give are treated with harshness and neglect. The English system of having but one operating-room for each hospital, and fixed days for operations, which takes place in the presence of the whole staff, also meets with Dr. Barré's approval. He points out that one case of instruments for the use of all is more likely to be kept complete and serviceable than when each ward is provided with a separate set. Although, as this letter shows, there is considerable room for improvement in the management of French hospitals, it is not very likely that any change for the better will be made. The official mind is convinced that *tout est pour le mieux dans le meilleur des mondes possibles*, and looks upon "administration" as the application of the force of inertia to the repression of useful innovation. Until some medical legislator in want of a hobby can be induced to take up the subject, things will remain very much as they are. M. Montagu Lubbock, M.B. Lond., a student of Guy's Hospital and formerly of Paris, composed a thesis for the M.D. of this Faculty a few days since. The subject was the Diagnosis of Meningitis, and he obtained the highest commendation, passing with the note "*extrêmement satisfait.*"

Mr. Alfred Lingard, of Derby, who worked for some time in the physiological laboratory of the Collége de France, has been elected a titular member of the Paris Anthropological Society.

ZULULAND.

(From our Special Correspondent.)

IN taking up the thread of my story of medical work in South-Eastern Africa, I cannot refrain from alluding to the dreadful and most sad death of Prince Louis-Napoleon. But a day or two has elapsed since the startling news reached us, and I do not exaggerate when I state that the heart of every English colonist beats quick with sad emotion at the pitiful details. We feel as if the cloud, already dark enough, is rendered still darker by the never-to-be-forgotten disaster. The greatest cause of heartburning is that the chivalrous young Prince, whose body is now being carried over the sea to his beloved France, should have lost his life in a savage surprise, which never should have been allowed to be possible. All old colonists are simply struck dumb at the event. The tragedies of "Isandula" and "Intombi" seem to have been acted in vain. The news was received here as much "in anger as in sorrow"—in anger that such a blot should have been made on the scroll of English fame; in sorrow that the heart of the illustrious mother of the hopeful Prince should be torn and broken by such a dreadful loss. If the gallant youth had fallen in the repulse of the brave foe with whom we are at war, the reflex of his daring would have shone on and illuminated the bright banner of French renown, but that he fell alone and unassisted beneath the cruel spears of lurking savages, is not to be thought of without a deep sigh of lament by all. The blow of the fatal news will hardly fall with less weight on the heart of our Sovereign Lady the Queen; for though living remote from the metropolis, colonists know enough of the deep fund of sympathy which her Majesty possesses; that from her ample experience of sorrow she will be able to sooth the troubled spirit and bind up the breaking heart of her whom one may in truth call "the Donna Dolorosa" of the age.

To revert to the kind of diseases which will give work to the medical staff now in the field, I think that rheumatism will form a large class. Rheumatism, as occurring in men, lately from home, notwithstanding all the care with which the soldier is surrounded in barracks, may naturally be expected to assume a more severe phase. On healthy young fellows with a reserve force of resistance, a few nights spent in the soaking rain, or on the damp ground, ought not to tell much, but on those who are less robust, and in whom the tendency to rheumatism is latent, the experience will be sure to tell. But it is not of this kind of rheumatism I would write, but of cases of "rheumatic fever," which may be expected to occur, and from which the patient often receives serious damage. The question of rheumatic fever still opens a wide field for observation. Rheumatic fever or "sinken korst," as the Dutch call it, is a disease of very grave nature and by no means uncommon; from time to time it seems to occur as an epidemic, and it has been a matter of frequent notice and conversation with me, among the rural population in South Africa, and chiefly among the Dutch farmers. Its relation to exposure of the individual to wet and cold seems to be very little. One of the worst cases I ever saw occurred in the person of the wife of a Dutchman, who was living a waggon-and-tent life in a little ravine on the bank of the Orange River. It occurred in the height of the severe drought of about 1861, which I have alluded to in a former paper I found my patient lying on a tressel-bed, in a tent; "the sky was as brass," the whole country *in extremis*, burnt up by the fierce solar heat. The poor woman was bound hands and feet, unable to move by the rheumatic swellings and pain, the myriad of flies which buzzed about the tent being brushed away from her face by a little naked bush child, waving a bundle of ostrich feathers. I investigated the case, prescribed the then usual remedies, alkaline mixture and opiates, and rode away. About two months afterwards my patient presented herself in my consulting-room, looking well and hearty, coming forward with a congratulation at her present health. I was met by the exclamation, "De doktor goot had niet gehelp," which being interpreted is, "the doctor's medicine didn't help a bit." I received her criticism with a "smile," and politely inquired what had helped her; when she said the old Hottentot shepherd had cured her with a decoction of tips of willow, which fringe the banks of the Orange river. "This story of willow" I have before related in a past number of THE LANCET, or, rather, Dr. Maclagan put it in your paper at the same time, remarking how strange it was the "untutored savage," by result of frequent experience of its value, had given a remedy which of late had been found to be of so much service in the treatment of rheumatic fever.

In the use of the salycylate of soda, I think an advance has been made in practical medicine, almost equal to the use of quinine in malarious fever. But the question of rheumatic fever in a South African climate is] the point on which I wish to write. It has been presented to my observation, and doubtless to other practitioners in South Africa, that the so-called "rheumatic fever" gives rise, not only to severe heart complications, but the poison, whatever it may be, sets up suppurative inflammation in and about joints. Those who have travelled much in South Africa must have seen cases occurring in children of people, living in [high and dry districts, in which the unfortunates have been crippled for life by an attack of "rheumatic fever"; the evidence of the inflammation having run on to suppuration being the depressed scars and puckers about the tissues of the joints. I may remark that I have met with a few cases of the so-called "rheumatic fever" which have terminated fatally, with a rapid and sustained temperature of 104° to 107°, when the patient seemed to have been killed by the profound influence of the poison or by the high temperature.

In view of this experience, may we not lean to the opinion that the genuine "rheumatic fever" is not simply due to an arrest of skin or kidney action, from cold and wet, but to a state of blood, influenced by atmospheric causes, *plus* an

insanitary environment, which is analagous to that state which produces "remittent" or "intermittent fever": in the one instance, the cause operating on the mucous tract; in the other, the rheumatic, the action is exhausted on the fibrous tissues of the body. At any rate, whatever the theory, salicylate of soda is our sheet anchor; and whether the old Hottentot is to wear "the crown of willow leaf," or Dr. Maclagan, is merely a matter of fanciful conjecture.

The fact of inflammation, the result of rheumatic fever, sometimes, I may say not infrequently, running on to suppuration of joints, in cases occurring in the hot high plains of South Africa, is not without pathological interest. I had intended alluding to dysentery as we find it influenced by South Africa climate; as the subject is too serious to be ignored, I will, with your permission, reserve it for a future paper.

Port Elizabeth, June 12th, 1879.

Obituary.

RALPH HOLT KAYE, M.R.C.S.

MR. KAYE was a practitioner of nearly fifty years' standing in the country town of Radcliffe Bridge, Manchester, where his loss is deplored by all. He was charitable to an extent that few country doctors can afford to copy, having given to many needful families his skilful services for as long as twenty years gratis. During the "cotton famine" especially did Mr. Kaye shine as a true philantropist; besides his professional aid, he gave away to those in distress provisions and clothing. His cheering kindness and liberality were continuous, and those in reduced circumstances could leave their bed of affliction without the aching heart which doctors' bills invariably entail. The esteem in which he was held by the numerous colleagues he had around him was only equalled by that of the public, which was testified by a handsome testimonial, consisting of a service of plate value £500, subscribed for by upwards of 1400 persons, and presented by his close friend the Rev. R. Fletcher, Vicar of St. Thomas's Church, in the district where Mr. Kaye practised. Mr. Kaye interested himself in local government, and was for about eight years a member, and for two years the chairman, of the Radcliffe Local Board, which office he found it necessary to abdicate in March last, owing to ill health. He was also the inspector of factories in the district. Up to a little time prior to his death, which transpired on the 22nd instant, whilst he was resting in his chair, after the performance of some professional duties; he displayed unabated skill and earnestness in his work, and his energy, although seventy-two years old, was such as most practitioners would benefit by imitating. The cause of his death was a fit of apoplexy, which killed him before the arrival of medical assistance.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Fellows of the College on July 31st:—

Bright, George Charles, M.D. Oxon., Cannes, France.
Sparks, Edward Isaac, M.B. Oxon., Crewkerne.

On the same day the following gentlemen were admitted Members of the College:—

Lush, William George Vawdrey, M.D. Lond., Weymouth.
Sharkey, Seymour John, M.B. Oxon., St. Thomas's Hospital.
Simon, Robert Michael, M.B. Cantab., Manchester.

The following gentlemen were also admitted Licentiates of the College:—

Ashe, William Percy, Linden-gardens.
Bullock, Charles, St. Bartholomew's Hospital.
Burwash, Henry John, Kennington-road.
Chamberlain, Edward Twyford, Southsea.
Coles, Donald Alexander, St. Bartholomew's Hospital.
Dale, Frederic, York.
Davies, Hugh Edward, University College Hospital.
Evans, Arthur Llewellyn, University College Hospital.
Francis, William, Huntley-street.
Freeman, William Thomas, Burnham.
Gibbes, Heneage, Oberstein-road.
Goyder, Charles McIvhor, Infirmary, Newcastle-on-Tyne.
Gurd, David Fraser, Lambeth-road.
Hassan, Syed, Bedford-place.
Henderson, Cecil, Clifton.
Hill, Charles Birnie, University College Hospital.
Lewis, John George Stephen, Windsor-road, Ealing.
Lunn, John Reuben, Children's Hospital, Shadwell.
Macdonald, George Alexander, Hull.
McMunn, James, Gower-street.
Nicholson, James Edward, St. Bartholomew's Hospital.
Palmer, William Pitt, Ashill, Ilminster.
Patterson, George Henry, Brighton.
Pierson, Alfred Henry, Blessington-road, Lee.
Price, Edward Morris, York-road, Leamington-park.
Sykes, William Ainley, Golcar, Huddersfield.
White, Richard Watts, Guy's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 31st ult.:—

Adam, Caleb Donovan, St. Peter's-park.
Alden, Ebenezer Wenham, L.S.A., Oxford.
Allnatt, John, Dartmouth.
Bentham, Edward Cooper, Barbadoes.
Elliot, Frederick John, Paignton.
Fischer, Charles, M.D. Wurzburg, Harley-street.
Gimlette, Thomas Desmond, Southsea.
Havell, Charles Graham, Reading.
Higson, James, L.S.A., Blackburn.
Jago, Edwin Osborne, Plympton, Devon.
Lillies, Herbert, Chudleigh, Devon.
Mark, Leonard Portal, Queen Anne-street.
Nall, Samuel, B.A. Cantab., Whaley Bridge, Cheshire.
Norman, William Alford, Dulwich.
Scott, Alfred, Brighton.
Sweeting, R. D. Roker, Clapham-park.
Taft, Edward Sabine, Highbury-park.
Watts, Edward Corrigham, Bernard-street.
Webb, William Simpson, St. George's road.
Wyatt, William Thomas, B.A. Oxon., Regent's-park-road.

Of the 228 candidates examined during the past fortnight, 136 passed to the satisfaction of the Court and obtained their diplomas; 21 passed in Surgery, and when qualified in Medicine will be admitted Members; the remaining 71 failed to reach the required standard, and were referred for six months' further professional study. Six candidates who passed in Surgery at previous examinations, having subsequently obtained a medical degree or licence recognised by the College, were also admitted Members. The number of candidates examined during the corresponding period of 1878 were 195, of whom 115 obtained their diplomas, 12 passed in Surgery, and 68 failed. This is the last examination at the College until November.

The Museum and Library will be closed as usual during the month of September for the necessary repairs, cleaning, and dusting.

UNIVERSITY OF LONDON.—The following is a list of candidates who have passed the Preliminary Scientific (M.B.) Examination:—

FIRST DIVISION.

Bonnett, Frederick William, Owens College.
Bindley, Robert Alfred, Guy's Hospital.
Black, William Jones, Owens College.
Botham, Richard Henry, King's College.
*Caiger, Frederick Foord, St. Thomas's Hospital.
Chevas, James Trelawney, King's College.
Clarkson, Edward, University College.
Cockey, Edmund Percival, Epsom College.
Cooper, Henry Charles Evans, Guy's Hospital.
Corbin, Eustace Rhodes St. Clair, University College.
Dacre, John, Yorkshire College, Leeds.
Dent, Harry Lord Richards, King's College.
Duncan, Horace, University College.
*Dutt, Upendra Krishna, University College.
Elgood, Charles Reginald, University College.
*Elliott, John, Owens College.
Esser, Henry Collen, Guy's Hospital.
Floyer, William Wadham, Guy's Hospital.
Fox, Robert Fortescue, private study and London Hospital.
*Gostling, William Ayton, University College.
Green, Albert, Guy's Hospital.
*Halford, Bernhard Frederick, University College.
Harvey, James, University College.
Hayman, William Speed, King's College.
Heatherley, Francis, University College.
Hind, Wheelton, Guy's Hospital.
Hinds, Frank, University College.
Hooper, Henry Walpole, St. Bartholomew's Hospital.
Hughes, Richard Benjamin, University College.
Jobsens, William, Queen's College, Birmingham.
Lankester, Alfred Owen, St. Bartholomew's Hospital.
*Lawrence, Laurie Asher, St. Bartholomew's Hospital.
*Luff, Arthur Pearson, St. Mary's Hospital.
Marriner, William Herbert Lister, St. Thomas's Hospital.
Martin, Albert, Wellington College, N.Z., and Guy's Hospital.
*Merrifield, Sydney Sargent, King's College.
Morgan, Thomas Whitworth Sewell, King's College.
Newland, Edward Oriel, Guy's Hospital.
Nunn, John Robert, University College.

Paley, Frederick John, St. Bartholomew's Hospital.
Penfold, Fred. William Henry, Guy's Hosp. and Epsom College.
Pettifer, Edmund Cleaver, St. Bartholomew's Hospital.
Powell, John Joseph, University College.
Prideaux, Frances Helen, London School of Med. for Women.
Relton, Bernard, St. Thomas's Hospital.
Reynolds, Ernest Septimus, Owens College.
Roberts, John Saunders Hughes, University College.
Roughton, Edmund Wilkinson, St. Bartholomew's Hospital.
Rouse, Rolfe Edward, St. Thomas's Hospital.
Scharlieb, Mary Ann Dacomb, Univ. Coll., and priv. study.
*Settle, Henry, St. Bartholomew's Hospital.
*Shore, Thos. Wm., Hartley Institution and R. Sch. Mines.
Shove, Edith, London School of Medicine for Women.
Short, Thomas Sydney, King's College.
Slater, Drace John, St. Bartholomew's Hospital.
*Slater, William Arnison, Guy's Hospital.
*Spencer, Herbert Ritchie, University College.
*Spong, Charles Stuart, Guy's Hospital.
*Stevenson, John, Owens College.
Strugnell, Walter Thomas, St. Bartholomew's Hospital.
Targett, James Henry, Guy's Hospital.
Taylor, Alfred Ernest, University College.
*Thorburn, William, Owens College.
*Tomlinson, Emily, Girton College, Cambridge.
Turner, Alfred Jefferis, University College.
Vann, Alfred Mason, King's College.
Vernon, John James Dean, Owens College.
Vinrace, Edward Dennis, St. Barth. Hosp., and Univ. Coll.
Walker, Ernest George Agars, St. Bartholomew's Hospital.
Whitcombe, Philip Percival, Epsom Coll. and St. Mary's Hosp.
Wilson, Thomas, University College.
Winter, Thomas Russell, Guy's Hospital.
Winterburn, Joseph Williamson, Owens College.
*Womack, Frederick, St. Bartholomew's Hospital.
Wynter, Walter Essex, St. Barth. and Middlesex Hosps.

SECOND DIVISION.

Birch, Henry Priestley, University College.
Brown, William Henry, University College.
Dudley, William, Queen's Hosp. Birm., Univ., and priv. study.
Evans, William Arnold, Owens College.
Finney, Robert Charles, private study.
Graham, William Perceval, University College.
Green, Charles David, St. Thomas's Hospital.
Hodgson, Gerald George, King's College.
Hull, Walter, St. Thomas's Hospital.
Jones, John Hervey, Owens College.
Lucas, Charles Arthur, St. Thomas's Hospital.
Lynam, Robert Garner, King's College.
Maude, Arthur, St. Bartholomew's Hospital.
Ozzard, Albert Tronson, private study and tuition.
Pilgrim, Herbert Wilson, Harrison's College, Barbadoes.
*Player, Charles Ernest, private study and Guy's Hospital.
Pointon, James, private study.
Smallpiece, William Donald, Guy's Hospital.
Stewart, Arthur Hastings Lanfear, St. Bartholomew's Hosp.
Thomson, Theodore, Owens College.
Voisey, Clement Bernard, Owens and Stonyhurst Colleges.
Walker, Alfred William Hinsley, Owens College.
Walters-Hope, Edward Alfred, St. Bartholomew's Hospital.
Ward, Anthony Arthur, Yorkshire College, Leeds.
Williamson, Herbert Holdrich, Epsom and Univ. Colleges.

* These candidates have also passed in the Mathematics of the First B.Sc. Examination, and are now admissible to the Second B.Sc. Examination.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on July 31st:—

Bowe, Francis, Great Percy Street.
Dartnell, William Abraham, Sutton Coldfield.
Hitch, Frederick, Bromley-by-Bow.
Jones, Thomas, Penddem, Cardiganshire.
Price, Edward Morris, York-road, Warrington-park, Acton.
Rudd, Charles Frederick, Petherton-road, Highbury New Park.
Smith, Ernest Barratt, St. John-street, Berkeley-square.
Smith, Henry, Plumstead, Kent.
Walker, John Sydenham, Adelphi-terrace.

The following gentlemen on the same day passed the Primary Professional Examination:—

Walter Cooper and Charles Llewellyn Tripp, St. Bartholomew's Hospital; William Henry Grigg and Edward Shearman Vachell, London Hospital; Melville Richard Hindmarsh Jay, St. Thomas's Hospital.

UNIVERSITY OF GLASGOW.—The following is a list of candidates who on July 31st had the undermentioned medical degrees conferred on them by the University:—

DOCTOR OF MEDICINE.

Brown, Archibald, M.B. Scotland.
Hunter, Charles D., M.B., Scotland.
Hutchinson, John, M.B., Ireland.
Reid, Thomas, M.B., Scotland.
Sinclair, Robert, M.B., Scotland.
Waddell, Arthur R., M.B., Scotland.

BACHELOR OF MEDICINE AND MASTER IN SURGERY.

Adam, Thomas B., Scotland. (Commendation.)
Allan, William, Scotland.
Barton, John A., Scotland.
Birchall, Thomas B., England.
Buchanan, Peter, Scotland.
Cameron, John M., Scotland.
Chalmers, Archibald K., Scotland. (High commendation.)
Crawford, Alexander W., Scotland.
Crawford, John, Scotland.
Cunningham, Peter H., Scotland.
Davidson, Alexander, Scotland.
Donald, William S., Scotland.
Duff, John, Scotland.
Fullarton, Neil, Scotland.
Hamilton, Robert, Scotland.
Hargreaves, Mark K., England.
Haworth, Edwin, England.
Lees, Robert, Scotland.
Longwill, David, Scotland.
Lyon, Robert, Scotland.
Lyons, Harry S., Biscay.
M'Alister, William, Scotland. (Commendation.)
M'Aulay, Angus, Scotland.
Mackenzie, James B., Scotland.
Mackenzie, William J., India.
Macphee, Angus, Scotland.
M'Vie, William, Scotland.
Meehan, Arthur, Scotland.
Mecredy, Robert D. W., Ireland.
Mitchell, Dugald, Scotland.
Moir, William B., Scotland.
Muirhead, Islay B., M.A., Scotland. (High commendation.)
Mungall, Daniel, Scotland.
Nandi, Sambhu Chandra, India.
Napier, Charles, Scotland.
Nicol, William, Scotland. (High commendation.)
Peden, William K., Scotland. (Honours.)
Pinck, Charles Harry, England.
Pinkerton, Charles, Scotland. (Commendation.)
Pollock, Alexander Barr, Scotland.
Pollock, William, Scotland.
Porter, Robert, Ireland.
Smith, John M., Scotland.
Stevenson, Ralph D., Australia. (Honours.)
Storer, George, Scotland.
Taylor, William, Scotland.
Wickens, George F., England.
Willis, William R., Scotland.
Wilson, James S., Scotland.
Wilson, John Neil, Scotland.
Yair, John M., Scotland.
Yarrow, Henry, Scotland.

BACHELOR OF MEDICINE.

Glaister, John, Scotland. (Commendation.)
MacKeith, William D., Scotland.
Sinclair, John, Scotland.

INDIAN MEDICAL SERVICE.—The following candidates for commissions as Surgeons in the above service were successful at both the London and Netley Examinations on the 4th inst.:—

	Marks.		Marks.
*F. F. Perry	5535	W. F. Thomas	4308
P. W. Dalzell	4994	J. C. Smith	4288
S. Little	4960	H. G. L. Wortabet	4275
G. H. D. Gimlette	4910	E. P. Frenchman	4071
C. B. Hunter	4837	R. James	3949
M. Galsford	4355	S. C. Sarkies	3846
C. H. Murray	4580	D. S. E. Bain	3622

* Gained the Herbert Prize, the Martin Memorial Medal, and the Parkes Memorial Bronze Medal.

NAVAL MEDICAL SERVICE.—The following candidates for commissions as Surgeons in the above service were successful at both the London and Netley Examinations on the 4th inst.:—

	Marks.		Marks.
A. G. P. Gipps	4642	J. B. Clibborn	3360
J. Hunter	4497	W. G. Jack	3000
R. A. Simpson	3905	A. Emson	2713
J. F. Donovan	3494	R. E. Biddulph	2377
R. McIver	3438		

THE Library of the Royal Medical and Chirurgical Society will be closed from Monday, August 11th, to Wednesday, September 10th, both days inclusive.

DR. CASSELLS, of Glasgow, has been elected corresponding member of the Société Royale des Sciences Médicales et Naturelles de Bruxelles, by the unanimous vote of the president and members of that Society.

THE Leicester Town Council and Urban Sanitary Authority, have, upon the recommendation of the Sanitary Committee, increased the salary of Dr. William Johnston, the assistant medical officer of health, from £100 to £150 per annum.

HYDROPHOBIA.—A young lady named Collins died in the Meath Hospital, Dublin, on the 29th ult., from hydrophobia. The deceased was bitten by a pet terrier on the 11th of June, and symptoms of the disease first appeared on the 26th ult.

EPSOM COLLEGE.—At the June matriculation examination at the University of London, seventeen of the Epsom boys passed: five in Honours, ten in the first division, and two in the second division. Mr. W. J. Bradford, a Foundation scholar, was sixth in the Honours list.

THE suggestion of the Local Government Board that one medical officer of health should be appointed for the whole of the Isle of Wight rural sanitary district, instead of the nine poor-law district medical officers as at present, was brought forward at the last meeting of the Authority, and, after considerable discussion, negatived by 20 against 4.

APOTHECARIES' HALL OF IRELAND.—At a meeting held on the 1st instant, the following members were elected as office-bearers for the ensuing year:—Governor: John Evans. Deputy-Governor: Edward H. Bolland. Court of Directors and Examiners: Thomas Collins, Arthur Harvey, Charles Holmes, Charles H. Leet, Charles F. Moore, Robert Montgomery, Henry P. Nolan, Jerome O'Flaherty, Edward J. O'Neill, George B. Owens, John Ryan, James Shaw, George Wyse. Examiners in Arts: Edward W. Collins, Arthur Wilson. Representative on the General Medical Council: Charles H. Leet.

PRESENTATION.—Recently a deputation of the inhabitants of Carlingford and surrounding neighbourhood waited upon Dr. Barbor, and presented him an address accompanied by a massive silver salver, in token of regard, and on his resignation of the post of medical officer to the Carlingford Dispensary District, an appointment which he held for the past sixteen years. The address stated that by his skill and close attention to his duties he had gained their esteem, won their confidence, and deeply impressed them with the most favourable opinion of his professional abilities.

THE LIVERPOOL WATER SUPPLY.—The Town Council have, at last, decided what means are to be employed to supply Liverpool with abundant and pure water. By a majority of thirty-six votes to eight, it was resolved to impound the waters of the Vyrnwy. This does not however, mean that the matter is settled, but simply that an initiative has been taken; and it still remains to be seen whether the rate-payers will be satisfied, and whether in Parliament vested interests will not oppose the damning up of a river. Thus the advocates of rival schemes are not yet silenced; and voices are still raised in favour of utilising the Haweswater lake, or of sharing with Manchester the Thirlmere supply, while some persons maintain that, by digging deep enough, subterraneous rivers of the purest water will be found running under the foundation of Liverpool.

HEALTH OF IRELAND.—During the June quarter there were registered in the 798 Registrars' Districts in Ireland 36,601 births, a number equal to a birth-rate of 27·3 in every 1000 of the population; and 28,115 deaths, representing an annual mortality of 21·0 per 1000. The births were somewhat under the average for the quarter, the death-rate considerably in excess. This high mortality was due to the severe wintry weather, which caused a large number of deaths from diseases of the respiratory organs, especially among the aged. The deaths from the eight principal zymotic diseases were 2349, or 8·4 per cent of the total deaths; being 667 under the number from the same causes in the June quarter of last year. Fever caused 774 deaths; diarrhœa, 435; whooping-cough, 416; scarlatina, 307; measles, 183; small-pox, 153; diphtheria, 74; and simple cholera, 7.

Medical Appointments.

ARMOUR, A., M.D., has been appointed Medical Officer of Health for the South Stockton Urban Sanitary District, at £20 for one year, vice Laidler, deceased.

BOOKEY, W. J. B., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Collattin and Clonegal Dispensary District of the Shillelagh Union, co. Wicklow, at £100 per annum and fees, and £15 per annum as Medical Officer of Health, vice J. W. Bookey, M.B., L.R.C.S.I., resigned.

BURGESS, E., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Parish of Dunrossness, Shetland, vice Duncan, resigned.

CARTER, F., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer of Health for the Eastern Sub-district of the Billericay Rural Sanitary District, Essex, at £50 per annum for three years.

FOX, C. N., M.B., C.M., has been appointed Medical Officer, Public Vaccinator, &c., for the Crossakeel Dispensary District of the Oldcastle Union, co. Meath, at £120 per annum and fees, and £15 per annum as Medical Officer of Health, vice Sparrow, appointed to the Kilskeer Dispensary District of the Keels Union.

FRASER, D. M., M.B., C.M., has been appointed House-Physician to the Liverpool Northern Hospital, vice Neale, resigned.

GILMOUR, T. F., L.R.C.P.Ed., L.F.P.S.G., has been appointed Out-door Accoucheur for the Southern District of the Glasgow Maternity Hospital, vice Taylor, deceased.

HAVELL, C. G., M.R.C.S., has been appointed Resident Medical Officer to St. Mary's Hospital, vice Fraser.

HOLMES, J., M.D., C.M., has been appointed Certifying Factory Surgeon for the District of Radcliffe, Lancashire, vice Kaye, deceased.

MACKENZIE, W. S., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Altofts Urban Sanitary District, Yorkshire, vice Wood.

MACMUNN, Dr. J., has been appointed Junior Resident Medical Officer to the Great Northern Hospital, vice Pope.

MOIR, J., M.B., C.M., has been appointed Out-door Accoucheur for the Central District of the Glasgow Maternity Hospital, vice Wallace, resigned.

MOULLIN, J. A. M., M.B., M.R.C.P.L., has been appointed an Assistant-Physician to the Hospital for Women.

PAULLEY, J. N. L., L.R.C.P.Ed., M.R.C.S.E., has been appointed Resident Accoucheur to the Queen's Hospital, Birmingham, vice Hacon, resigned.

PHILLIPS, D. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Romsley District of the Bromsgrove Union, vice Dunn, deceased.

PORTER, T. L., M.B., M.R.C.S.E., has been appointed Medical Registrar to the Westminster Hospital, vice Murrell, resigned.

PRINGLE, R., L.R.C.P.Ed., L.F.P.S.G., has been appointed Certifying Factory Surgeon for the District of Strensall, Yorkshire.

QUENNELL, J. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Western Sub-district of the Billericay Rural Sanitary District, Essex, at £60 per annum for three years.

RUDKIN, G. M. A., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Certifying Factory Surgeon for the District of Elvington, Yorkshire.

THOMPSON, R., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Surgeon to the Kingston-upon-Hull Police Force, vice Holden.

THOMSON, W., M.D., F.R.C.S.Ed., has been reappointed Medical Officer of Health for the Peterborough Rural Sanitary District, at £100 for one year.

WARD, H. S., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Horncastle.

WARD, J., M.D., M.R.C.S.E., has been reappointed Medical Officer of Health for the Cockermouth Rural and the Cockermouth, Keswick, and Workington Urban Sanitary Districts, at £400 per annum for three years.

WEBSTER, C., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Bewdley Urban Sanitary District, Worcestershire, until the 9th November.

WINCKWORTH, C. E., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer for the Shefford District of the Biggleswade Union.

Births, Marriages, and Deaths.

BIRTHS.

BATTERBURY.—On the 31st ult., at Berkhampstead, the wife of Richard Legg Batterbury, M.B., of a son.

BELLINGHAM.—On the 22nd ult., at 265, Castle-street, Dudley, the wife of J. Bellingham, M.R.C.S.E., of a daughter.

DUNSCOMBE-HONIBALL.—On the 30th ult., at Chester, the wife of Dr. Dunscombe-Honiball, of a son.

HARRIS.—On the 28th ult., at Falmouth, the wife of Arthur B. Harris, M.D., of a son.

MYLES.—On the 29th ult., at Parsonstown, King's County, the wife of James Peacocke Myles, L.R.C.P.Ed., of a daughter.

PHILLIPS.—On the 29th ult., at Reading, the wife of Henry H. Phillips, M.D., of a daughter.

MARRIAGES.

BOUSTEAD—WILLIAMSON.—On the 22nd ult., at St. Paul's Church, Edinburgh, by the Rev. J. Hamilton Blyth, M.A., Incumbent of St. Paul's, assisted by the Rev. A. Long, M.A., Surgeon-Major R. Boustead, F.R.C.S. &c., H.M.'s Indian Army, to Kitty, second daughter of T. Williamson, Esq., M.D., F.R.S., F.R.C.S., &c., of Carlton-terrace, Edinburgh, and Charlotte-square, Leith. No cards.

FAIRBANK—WOODCOCK.—On the 31st ult., at the Parish Church, Wigan, by the Rev. H. R. Huckin, D.D., Head Master of Repton School (brother-in-law of the bridegroom), assisted by the Hon. and Rev. Canon Bridgeman (Rector), and the Rev. F. E. Woodcock (brother of the bride), William Fairbank, Esq., M.R.C.S.E., of Burnham, Bucks, to Caroline Florence, youngest daughter of the late John Woodcock, Esq., of The Elms, Wigan.

DEATHS.

CARR.—On the 18th ult., at Newcastle-on-Tyne, Charles Carr, M.R.C.S.E.

FOSTER.—On the 2nd inst., at Collumpton, Devon, James Murray Foster, F.R.C.P.Ed., F.R.C.S.Ed., &c. &c., late of Assam, E.I., Lieut. 5th Devon Rifle Volunteers. Friends will please accept this intimation, and Indian papers please copy.

GRAY.—On the 28th June, of cholera, at Shillory, Assam, Douglas Stephen, second son of Edward Gray, M.B., C.M., of Cinnamara, Jorhal, Assam, aged 2 years and 7 months.

MANING.—On the 23rd ult., at Derby, Herbert Stanley Maning, L.F.P.S.G., aged 27.

SHANNON.—On the 12th ult., on board the s.s. *Blenheim*, on the voyage from Demerara to London, Mary, the beloved wife of M. Shannon, L.F.P.S.G., aged 35.

WARE.—On the 25th ult., at Southampton, James Richardson Ware, aged 79.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

BEST COPY AVAILABLE

Notes, Short Comments, and Answers to Correspondents.

SUMMER DIARRHŒAL FATALITY IN BERLIN.

THE rate of mortality in Berlin has recently shown a remarkable increase, and during the first week of July was equal to 49·8 per 1000; indeed the death-rate had averaged 41 during the four weeks ending 5th July. From an examination of the causes of death and the ages of the decedents, as given in the excellent weekly returns of mortality published in that city, it is evident that this great excess of mortality was almost exclusively due to exceptional infantile diarrhœal fatality. No less than 1429, or nearly 43 per cent., of the deaths from all causes recorded in Berlin during these four weeks were referred to diarrhœa. It is, moreover, evident from the following figures that this excessive fatality occurred mainly among infants. Of the 3339 deaths recorded in Berlin during the four weeks under notice, no less than 2103, or 63 per cent., were of infants under one year of age! This infant mortality from diarrhœa is the more remarkable on account of the unusually low temperature that generally prevailed during June, and it does not appear that the temperature in Berlin was higher than in other European cities. Diarrhœal fatality in England was lower during last June and July than in any corresponding period since 1860. It would be interesting to know the causes of this exceptional diarrhœal fatality in Berlin.

Students should refer to the recent numbers of THE LANCET, in which information about this degree appeared.

DISEASE AND PRISON DIET.

To the Editor of THE LANCET.

SIR,—Those of your readers who are interested in the hygiene of the criminal classes will regret to see that another case of pneumonia, occurring in a prisoner on low diet, has terminated fatally. I allude to Patrick Grimes, on whom an inquest was held in Armagh Prison on June 14th, and who was found to have died from "inflammation of the lungs, connected with a weak heart." That his heart should have been weak is not a matter of surprise, when we learn further that from his admission on March 18th to his transference to the prison hospital on May 28th "he had never received flesh meat of any kind nor soup." I am quoting the report of the governor's evidence as given in the *Armagh Guardian* of July 4th. Is it not time that some inquiry was instituted as to whether there there is a connexion between the diet and the disease in these cases, the occurrence of which does not seem invariably dependent on atmospheric conditions? A return of the infirmary cases of acute disease occurring in prisoners on low diet during any given year, if moved for by a member of Parliament, would, I think, afford very valuable information as to some of the results of prison dietaries.

It is commonly alleged that as prisoners have been known to gain weight even on the first-class diet of bread and gruel, there can be no danger in employing it; but such a result only occurs where the prisoner has been irregularly fed before imprisonment, and it is still unproved that this or any other low diet has enabled a prisoner to attain the average weight of his height. When, however, bread and gruel are followed, as is the case in English prisons, by a soup and vegetable diet for three weeks longer, the effect must be still further to depress the mental and physical energies. Low diet is an edge-tool, unfit for indiscriminate use, only to be employed in cases of absolute necessity by skilful hands and under careful supervision; yet it is applied wholesale to our criminal classes, young and old, weak and strong, the juvenile offender and the habitual inmate of a prison; and though the surgeon may seek to obviate ill-effects, there are almost insuperable difficulties in the way if he attempts frequently to set aside the appointed diet.

The authors of the present dietaries were no doubt animated by a praiseworthy motive to render gaols unattractive as a residence; but that is not the sole end of their institution. The health of the inmates, their reformation, and training to regular habits of work must be thought of as well; and is it likely that a man will be reflecting upon and repenting of his crimes while his whole mind is engrossed by the cravings of his stomach? There are also a sufficient number of coarse and uninviting articles of food to render their administration a punishment without endangering life, or diminishing the ability to perform useful labour on leaving prison. The deaths occurring under or directly attributable to low diet in gaols may be few; but pneumonia and certain other diseases, with some forms of insanity, are known to be induced by deficient food.[1] The recommendation, therefore, of the Penal Servitude Acts Commission, that the Scotch and Irish dietaries be revised, is a welcome sign. It is to be hoped that an alteration of the English dietaries will follow, and thus to allay all apprehension of their possible tendency to produce in our criminals the result of fatal disease.

Your obedient servant,

T. WEMYSS BOGG, M.B. Lond., M.R.C.P.,
Late Surgeon, Louth Prison.

St. Leonard's-on-Sea, July, 1879.

[1] See Parkes's Practical Hygiene, and Reynolds's System of Medicine; art. "Insanity."

OPIUM POISONING IN NEW ZEALAND.

THE report of the inquest on the body of the child, Frances Catherine Macullough, in a New Zealand paper, shows that chemists will prescribe even there, and that they will tamper with very dangerous drugs. The report also shows a coroner's jury will declare death to have come from natural causes when the evidence is convincing of death from laudanum. Fortunately it shows that there is a coroner in Wanganui who has the sense and courage to express his dissent from the finding of a jury. Mr. Sorley's evidence was contradictory, first expressing hesitation, and then saying he thought the child suffered from an overdose of some narcotic.

Anti-Quackery.—We must decline to notice the wonderful doctress.

THE SEPARATION OF DISPENSING FROM MEDICAL PRACTICE.

To the Editor of THE LANCET.

SIR,—I think that the remarks in your issue of July 19th on the above subject hardly do justice to the report of the Rochdale Chemists' Association. It is not quite correct that the medical men were asked "to give up dispensing on the understanding that chemists should give up prescribing." The medical men said very little on this point, and what was said seemed to express the opinion that there must be some little prescribing by chemists for slight ailments. The chemists argue that the more dispensing they have, the less prescribing they would feel inclined to do, and in practice this is found to be the case. Take any chemist's shop in London or the provinces where a considerable amount of dispensing is done, and I think the medical profession will have no reason to complain of the prescribing done there. Then you say, "There are great practical difficulties, the removal of which," in your opinion, "rests chiefly with chemists, whose present charges would render the change simply impossible." I am sure that the medical men have only to state any difficulties to ensure a full consideration of them by chemists. I consider the following paragraph which occurs in the chemists' report in a great measure answer the objection about chemists' charges: "A standard price being adopted by the chemists for general use, in cases which the prescriber thought deserving, the prescription might be marked with the letter P. (poor), when the chemist would charge one-half or one-third of the ordinary sum; and when the patient was very poor, the mark might be V.P., when no charge would be made for the medicine supplied, but this would be followed by the chemist giving a recommendation to the dispensary, or he would refer the case to the Charity Organisation Society."

Hoping you may on some future occasion make room for the entire report,

I remain, yours truly,

Rochdale, July 30th, 1879. RALPH ROBINSON.

Mr. P. M. Corner.—An Association for Promoting Vaccination direct from the Calf was established a short time ago, with offices at 264, Oxford-street. Some account of this Association will be found in THE LANCET, vol. i., p. 519, 1878.

W. T.—We are not aware of any authoritative work on the subject named.

BURMESE ITCH.

To the Editor of THE LANCET.

SIR,—Two drachms of borax mixed with an ounce of sulphur ointment is a specific for Burmese itch. I have frequently prescribed it, and have never known it fail. It causes no irritation, and acts like a charm. The ointment should be rubbed into the parts affected twice a day, and its use should be continued for a week or so after the disease has disappeared.

Yours &c.,

E. R. JOHNSON,

Exmouth, August 4th, 1879. Surgeon, Bengal Medical Service.

Mr. Wm. Hardman.—Our correspondent should write a severe remonstrance, and say that if such conduct is repeated, a statement of it will be forwarded to the proper quarter.

M.R.C.S.L.—The letter can only be inserted as an advertisement.

EFFERVESCING DRINKS AND THEIR EFFECTS.

To the Editor of THE LANCET.

SIR,—I trust the subject I now bring under your notice will be deemed by you worthy the attention not only of the medical profession, but also of the public generally.

Some time since I purchased a small quantity of brandy from a local publican, who, having no other bottle convenient, put it into an empty lemonade-bottle, patent stoppered. About 4.30 A.M. (seven hours after purchasing the brandy) I poured some in a glass with twice the quantity of water. The mixture became turbid. I tried a second quantity with the like result. Later in the morning I employed rectified spirits of wine. The same result followed—a fluid like tea with milk. I detected acetate of lead, and I understand that it is largely used in the preparation of the india-rubber bands with which these bottles are furnished. I have had two cases this week from children who have been unwell, in my opinion, from drinking lemonade &c. from these bottles.

I shall be glad if any of your readers will give their opinion on the matter as to the injurious effects, this season of the year especially, to those who are in the habit of partaking of effervescing drinks.

Yours respectfully,

July, 1879. PRO BONO PUBLICO.

FILTH REMOVAL.

OUR Dublin correspondent writes: The Local Government Board for Ireland, in their recent report, refer to the subject of removal of filth from towns, and remark that the term "filth of towns" comprehends two distinct branches—one consisting exclusively of excrementitious matters, the other of every variety of dry refuse and rubbish. The object of the pail and ash-tub system, which has succeeded so admirably in Birmingham, Manchester, Rochdale, and the other towns, is to collect by a general course of domestic scavenging the two descriptions of town filth separately, each inhabited house being supplied with a pail and ash-tub. The scavengers remove the accumulations at regular intervals; and while the contents of the ash-tub are utilised for fuel, charcoal, mortar, &c., the contents of the pails are converted into a valuable manure. At Rochdale the contents of the pails are deprived of nearly all moisture by heat, leaving a residuum resembling the *poudrette* of Liernon. The report adds that the best value of this system is the gradual decrease of the death-rate in the several towns in which its introduction has been going on for several years past.

Mr. J. T. Spring must consult a medical authority in practice.

MEDICAL EXAMINATIONS AT THE UNIVERSITY OF DURHAM.

To the Editor of THE LANCET.

SIR,—I see by last week's LANCET that Mr. Berry was amused with my former letter. I am pleased at this, seeing that he was so very desponding previously. One would imagine from the tone of Mr. Berry's letter that he was a veteran of some forty years' standing. By consulting the Register, however, I find it is otherwise.

Mr. Berry says he has never heard of the Durham examinations being challenged! I may tell Mr. Berry that but a short time ago one gentleman in a letter characterised Durham as a *dernier ressort* for men. It was mainly to refute this charge, and to speak of the examinations as I found them, that I wrote my former letter.

Durham University is in need of no trumpeters. Still the sore point with Mr. Berry is that a man must be forty years of age before being allowed to go in for the M.D. for fifteen years' practitioners. Now, Sir, it must be clear to everyone that a man who has been fifteen years in practice can only have four years at most to wait before he is forty, since there is no qualification obtainable in this country under twenty-one years of age. I, of course, presume Mr. Berry does not encourage practice previous to qualifying! It is this fearful four years, then, of which Mr. Berry has such dread. Mr. Berry then jumps to another point. He would have the limit ten years' practice, others would perhaps prefer five, and so on. I would ask what would become of the M.B. exam.? Very few, if any, men would go in for it, preferring to wait the four years for the modified M.D.

One cannot help smiling at the cool manner in which Mr. Berry introduces as a set-off against the expenses of a year's residence the fifty-guinea fee for the M.D. Mr. Berry is perhaps not aware that the majority of men who go up to Durham for the year's residence are already qualified, so that the mere expense of living is not the only item to be taken into consideration.

Mr. Berry says: "I always thought that age carried honour and respect, and *was not a sign of examinational knowledge*. This to me appears ludicrous in the extreme. It means this: "That men presenting themselves for examination should be examined with different degrees of severity according to their several ages." Your correspondent can have had little experience of English examinations, otherwise he would not have advanced so absurd a proposition. If Mr. Berry (and his unfledged brethren) is in such want of a degree, and objects so strongly to residence and to the fifteen years' scheme, why does he not enter for the London, as he truly observes no residence is required for this? He will no doubt find that age will carry honour and respect; but he will be woefully deceived if he persists in believing that age will diminish the severity of the examinations.

I quite agree with Dr. Milson that the man who takes the M.D. Dur. will have a thoroughly good degree. I cannot agree with this gentleman, however, when he thinks that men will be discouraged because three of the four who lately presented themselves were rejected. I think it will be an encouragement to men, indicating that the degree is not to be obtained by the payment of a fifty-guinea fee *alone*, as some to their cost have discovered.

In conclusion, let me tell Mr. Berry that the degree which I have taken I am not ashamed of; on the contrary, I am proud of it. I may be in love with *my alma mater*, as Mr. Berry suggests. I am only sorry the latter has none to be in love with. When Mr. Berry does become fledged, we shall perhaps have an effusion from which we may derive some benefit. I remain, Sir, yours truly,

SAMUEL A. CRICK, M.B., M.S., &c.

St. Thomas's Hospital, London, Aug. 4th, 1879.

HOUSEHOLD VENTILATION.

To the Editor of THE LANCET.

SIR,—The plan suggested by Mr. Budd in last week's LANCET is identical with one described by myself in the *Medical Times and Gazette*, March, 1862, p. 339. Yours truly,

RICHARD NEALE, M.D. Lond.

Boundary-road, St. John's-wood, Aug. 4th, 1879.

CHLORAL IN RIGIDITY OF THE OS UTERI.

Mr. T. F. Cahill.—Dr. William Playfair is the obstetrician who has chiefly recommended chloral in labour, and in the specified circumstances. Our correspondent should study his views. The treatment of rigid os uteri is very important. Tartar emetic used to be recommended; but it is not so much used now as moderate doses of tincture of opium, fomentations, and warm baths.

Mr. H. E. Gifford.—We did not consider the announcement unprofessional.

NITRITE OF AMYL IN SEA-SICKNESS.

To the Editor of THE LANCET.

SIR,—To judge from the frequent communications on this subject, nitrite of amyl is not yet an established remedy in sea-sickness, and it would therefore seem desirable to record the experience of those who have used it. In a recent trip to the Channel Islands I administered it, and have reason to speak most highly of its efficacy. In my own case there was considerable nausea and very little vomiting. I inhaled three minims placed on the handkerchief, with the result of almost immediate relief to the nausea, and, this done, I repeated, with the same good result. On returning, a gentleman, who had suffered most acutely the whole of the voyage out, allowed me to administer three minims. In this case the nitrite caused violent vomiting; but both this and the nausea soon passed off, and did not return. He assured me that had it not been for the remedy he would have been troubled with sickness all the way home. Yours faithfully,

J. D. T. RECKITT, L.R.C.P. & L.R.C.S., &c.,

Newark Hospital, Aug. 3rd, 1879. House-Surgeon.

Mr. Buckell.—The unqualified assistants should be dealt with, if they act as practitioners, under the Apothecaries Act, or, if they use false titles, under the Act of 1858.

THE DISMISSAL OF DR. FOX AS MEDICAL OFFICER OF HEALTH FOR THE BILLERICAY UNION.

WE have been requested to publish the following:—

"A statement having appeared in THE LANCET, and been copied into the local journals, charging the guardians of the above union with having dismissed Dr. Fox from office in consequence of this gentleman having given offence to the above-named Board by a report upon the defective sanitary state of a village in the authorities' district, the Board feel, in justice to themselves, to deny *in toto* that the report made by Dr. Fox in 1874 had any influence in the decision arrived at by the Board in 1879, and they appeal to the fact of Dr. Fox's re-election in 1876 as a sufficient refutation of this calumny. In withdrawing from the combination, the Board were actuated solely by a desire to discharge their duties in the manner which appeared to them most conducive to the interests of the union, and with this statement of facts they are quite prepared to leave the case in the hands of the public.

"With regard to 'the outbreak of diphtheria in the same village,' the sole question for consideration was as to whether the disease was imported into the village, or whether it had originated therein. Upon these points the evidence was so conflicting that no positive data could be arrived at.

"The Board is extremely surprised to find it asserted that Dr. Fox's report is confirmed by Dr. Thorne's inquiry, as up to the present moment no report of Dr. Thorne's inquiry has been received by them, and they are at a loss to understand under what circumstances private individuals are permitted to inspect official documents before they are transmitted to the authority for whose information they are intended. So far from Dr. Thorne confirming the views entertained by Dr. Fox upon the matter of drainage, it was the opinion of those members of the Board who were present at the inquiry that Dr. Thorne considered the scheme proposed by Dr. Fox as inapplicable to a small village such as the one under consideration."

*** The answer to our comments on this subject is curiously instructive. The "official document" (as the Billericay authority is pleased to term it) which we were permitted to "inspect," and upon which we formed our opinion of the inquiry made by Dr. Thorne Thorne, and which confirmed Dr. Fox's views, was the report of the inquiry published at the time in one of the local journals, and which seems to have been forgotten by the authority. From this report we further gathered that Dr. Thorne had been in close official communication with the authority on the subject of his inquiry, and that he had sufficiently made known to them the results of that inquiry. It is not customary to consider reports in the newspapers on official inquiries of this sort as coming within the privileges attached to private documents, and still less to regard them as official papers. Again, it is a strange fact to learn that a sanitary authority holds that "the sole question" for its consideration relative to an outbreak of diphtheria in its district is whether the disease had originated therein. Ordinary people are under the impression that the law imposes grave duties on sanitary authorities for preventing the spread of serious infectious diseases. This simple admission on the part of the sanitary authority makes it obvious that a medical officer of health is at present out of place in Billericay, and that even a sanitary authority must be held to be largely superfluous there. The first paragraph of the answer must be read in the light of this astounding admission.—ED. L.

ARSENICAL PROSPECTUSES.

Mr. F. Aumonier has forwarded us a portion of a prospectus, which he states was distributed from house to house by a tradesman in London. This being of a vivid green, he suspected it contained arsenic, and he very properly dwells upon the danger which might arise therefrom. We have had this paper tested, and the report of the chemist is that the colour used is arsenical, arseniate of copper being present in large quantity.

Mr. M. G. B. Ozley.—We have no recollection of the notes, and are afraid that, if received, they have not been preserved.

Dr. Bellenden.—We are not aware.

A PROVIDENT MEDICAL INSTITUTE: A CAUTION.

To the Editor of THE LANCET.

SIR,—At the beginning of this year an Institute was started in Blackburn under the name of the Blackburn and District Provident Medical Institute. It appeared to meet with a favourable reception among some, at least, of the medical profession there, for several prominent members of the profession in that town became its medical officers. Wishing to extend the sphere of their operations, the manager and secretary of the Institute went into the towns and villages of the surrounding district in order to secure the services of medical gentlemen, and to appoint a man to canvass and collect for the Institute. Among other places, they visited the village in which another medical gentleman and myself are practising, and engaged our services for six months—viz., from the beginning of January until the end of June last. The agent appointed here canvassed and collected for two or three months; but, finding the business unable to support him, went off and obtained other employment. Another man began to do his work; but only collected for a few weeks, and that very irregularly, and, he, I believe, has ceased to do anything for the Institute. Up to the end of June I have been giving attendance in some cases, advice, and medicine to members of the Institute; and on writing to the secretary at Blackburn for information about remuneration for my services and an explanation of the affairs of the Institute here, he has not had even the common courtesy to answer my note. I have written to him twice, and still there is no reply. I can only conclude that, so far as this district is concerned, the whole thing is very unsatisfactory. Of course, people here have lost all confidence in the Institute, and instead of doing good, as it might have done, it has excited ill-feeling towards Provident Medical Institutes in general.

My object in exposing the affair thus, which is a statement of plain facts, is not to speak deprecatingly of the principle of Provident Medical Institutes in general, so long at any rate as they are managed and conducted unselfishly, and free of personal and individual interest, but it is to warn medical men and, through them, the public, to be chary of associating themselves with any such institution unless it is properly conducted.

I am, Sir, yours very truly,

August, 1879. M.B.

A Metropolitan Teacher.—In the six collegiate years from 1873-74 to 1878-79 inclusive, the number of candidates examined at the primary examinations for membership of the Royal College of Surgeons amounted to 4494, of whom 2945 were approved and 1489 rejected; the smallest number of candidates was 683 in 1873-74, and the largest number was 792 in 1876-77. At the pass examination the total number during the six years was 3106; of these, 2300 received their diplomas, and 806 were rejected.

Medo.—The qualification is double.

"LOCUM TENENS."

To the Editor of THE LANCET.

SIR,—I was glad to see the timely suggestion in your journal as to the desirability of organising some scheme whereby the services of trustworthy "locum tenens" could be secured for the profession, and I trust it will be taken up and carried into execution. In the interests of the profession such an organisation is needed to remedy the evils and defects which at present exist. Many general practitioners could tell similar tales to that related by one of them in your last week's issue; but these frequent disappointments arise from ignorance as to where reliable representatives are to be found. I am convinced that no really competent gentleman would ever dream of submitting to the indignity of placing himself at the beck and call of any of the agents.

The services of "locums" being indispensable, and the experience gained, by the young practitioner especially, in that capacity being simply invaluable, it is high time that this branch of the profession should take its interests into its own hands, and form a distinct organisation of its own.

Yours faithfully,

August 4th, 1879. A YOUNG LOCUM TENENS.

R. F. B.—A further study of physics and physiology will show our correspondent his error.

Mr. Mahoma.—The paper shall appear.

FOREIGN (COLONIAL) CIVIL APPOINTMENTS.

To the Editor of THE LANCET.

SIR,—Would any of your correspondents kindly furnish information as to above appointments? How remunerated, how obtained, and where they are generally held? Also as to emigration service.

Yours &c.,

August, 1879. M.D. GLASGOW.

C. F. G. and *Acting-Surgeon.*—The examination for the "certificate of proficiency" is chiefly on the equipment of army hospitals in the field, the transport of sick and wounded soldiers, the treatment of wounds and injuries in the field, and the duties to be performed by army medical officers in camps and bivouacs and during marches. The books to be studied are: the Medical Regulations; the Manual of Instructions for the Army Hospital Corps; and the Manual of Exercises for Stretcher-bearers and Stretcher Companies,—all three published by Clowes and Sons, Charing-cross. The application for examination must be made through the commanding officer of the corps to the general commanding the district.

THE USE OF THE FORCEPS.

To the Editor of THE LANCET.

SIR,—The recent proceedings before the Obstetrical Society, in which many of our experts and teachers have recorded the result of their experience and their opinions of the use of forceps, induces me to think that if the rank and file of the profession were to record the result of their practice and give their opinions on this subject, an amount of interesting and perhaps useful information might be obtained. I therefore enclose an abstract of cases attended in my private practice during the last eighteen years, and hope that many others may be induced to do the same.

Abstract of Midwifery Register from January 1st, 1861, to July 20th, 1879.

Total number of cases attended, 1050. The forceps were used in 54 of these cases. Of the children delivered by the forceps, 13 were born dead, but in no case did I attribute the death to their use. No maternal death occurred amongst the forceps cases; but a case of misadventure occurred in a primipara whom I delivered by forceps of a very large still-born child. On removing the placenta (which was adherent), I found the vagina ruptured, and that the hand passed into Douglas's pouch. This patient recovered in the usual time without a bad symptom, and has had several children since. In the first 300 cases attended I only used the forceps twice; but in the last 300 I used them 32 times. Of the first 300 cases, several are recorded "very tedious"; amongst the last 300 this only occurs once, the word "forceps" having superseded that of "tedious." Two maternal deaths occurred amongst the other (non-forceps) cases—one from suppressed variola, the other from eclampsia.

I have no notes as to the class of cases (whether high or low) in which the forceps were used.

I am, Sir, your obedient servant,

JAMES R. TUNMER, M.R.C.S.E., &c.

Paragon, New Kent-road, July 21st, 1879.

THE DANGER ATTENDING POST-MORTEM EXAMINATIONS.

To the Editor of THE LANCET.

SIR,—I have just returned from a post-mortem examination of an adult male under forty years of age, fifty-two hours after his sudden death. As would naturally be expected, the corpse was in full putrefactive fermentation. The inspection had to be performed in a very small back bedroom of a house in a crowded neighbourhood. The amount of mephitic gas liberated was very considerable, and, although every precaution afforded by a liberal supply of carbolic acid in dispersion and in solution was taken, the escape of deleterious emanation was most hurtful to those engaged, and must have spread dangerous material far and wide. Two important social laws should have prevented the possibility of such a result—firstly, the prompt decision of authority for the immediate autopsy after death; secondly, the instant removal of such a case to the parish mortuary. The public sanitary benefit resulting from such arrangements would be the example of early interments after decease, the establishment of the cause of death under circumstances best promoting the truth and certainty of such inspection, and the least risk to the public health. It is to my mind an absolute necessity that the coroner's immediate order for the *inspectio cadaveris* should be accompanied with the order to remove the body for that purpose to the public mortuary, and that all ranks of society should be subjected to such a law.

I am, Sir, your obedient servant,

July 30th, 1879. F.R.C.S.

THE LATE MR. CLEMENT WILLIAMS, OF MANDALAY.

To the Editor of THE LANCET.

SIR,—With your permission, as a friend of the late Mr. Clement Williams, of Mandalay, I should like to draw attention to just one omission in your excellent obituary notice of that gentleman in your last issue, which, to his own honour and that of the profession to which he belonged, deserves to be remembered at present—viz., his claims to have been the first Englishman who in modern times penetrated to Bhamó, on the frontier of China; and his narrative of his journey and account of the trade routes between Burmah and Zunan, the publication of which gave the initial stimulus to the steam navigation of the Irrawadi, and primarily fostered the idea, since so perseveringly but as yet not very successfully pursued, of tapping through the great Burmese Valley, the trade of Western China, and opening up that extensive and populous region to the manufactured products of this country.

Yours obediently,

D. H. CULLIMORE, F.R.C.S., &c.

Devonshire-street, Portland-place, Aug. 4th, 1879.

VACCINATION PROSECUTIONS.

WE refer our readers with satisfaction to the answer of Mr. Sclater-Booth to Mr. Serjeant Simon on the subject of vaccination prosecutions. It is lamentable to see a board of guardians encouraging the breakers of so beneficent a law as that of public vaccination. The liberty to have small-pox in a house is like the liberty to have gunpowder, and ought to be restricted.

A QUESTION OF HEREDITARY TAINT.

To the Editor of THE LANCET.

SIR,—With a view to form a general concensus of opinion, I would feel extremely thankful if you or any of your numerous readers would enlighten me on the following subject.

A., who may, on account of his occasional insatiable thirst for alcoholic potations, be deemed to be of moderately intemperate habits, has two children. The first, a girl, aged seventeen, is quite sound both mentally and physically. The second, a boy, aged thirteen, is imbecile. No family history of mania in any form. The mother of these children died from childbirth.

1. To what should this boy's imbecility be attributed?

2. Will there be any danger of the malady being developed at some future period in the eldest girl, who is quite sound now, as above stated?

3. Is there any ground for apprehension of her offspring being hereditarily affected in consequence of her younger brother's imbecility?

Yours obediently,

India, June 5th, 1879. S. M. D.

IT is requested that provincial papers sent for the information of the Editor may be marked so as to direct attention to the medical or sanitary matters it is desired to notice.

COMMUNICATIONS not noticed in the current number shall receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. C. T. Williams, London; Mr. Crowther, Hobart Town; Mr. M'Kendrick, Mr. Fair; Mr. Ross; Mr. Garrett, Walsall; Dr. Buckell, Sheffield; Dr. Young, Govan; Dr. Cassells, Glasgow; Dr. Alexander, Bradford; Dr. Dunn, Shadwell; Mr. Lee, Great Yarmouth; Dr. Moore, Glasgow; Mr. Bolton; Mr. Robinson; Dr. Marshall, Mitcham; Dr. Freyer, Azamgarr; Dr. Muir, Kirriemuir; Mr. Wheeler; Mr. Hampson, Manchester; Mr. O'Byrne; Dr. Mackey; Dr. Kerr; Mr. Chater, Uppingham; Mr. Row; Dr. Hutchinson, Sandwich Islands; Dr. Giffard; Mr. Moore, Bristol; Dr. Moir, Glasgow; Dr. Clifford Allbutt, Cork; Mr. Lawson Tait, Birmingham; Dr. Thin; Dr. Cole, Wanganui; Mr. Gray, Connemara; Dr. Reckitt, Newark; Dr. M'Kenna, Fulham; Dr. Bigg, St. Leonard's-on-Sea; Dr. Crick, London; Dr. Cullimore, London; Messrs. Blackwood; Dr. Fraser, Preston; Mr. Buckby, Leicester; Dr. Gill, Hastings; Mr. Read; Dr. Dyer, Ringwood; Dr. Ballenden, Dudley; Mr. Goddard; Dr. Neale, London; Mr. Johnson, Exmouth; Mr. Spring, Dublin; Dr. Lownds, Egham; Mr. Palmer; Dr. Johnstone, St. John's, New Brunswick; Mr. Harrison, Ipswich; Mr. Butin, Staplehurst; Dr. Thompson, Omagh; Dr. Leeson, Twickenham; Mr. M'Donald, Brecon; Dr. Fenwick, London; Mr. Fleming, Worksop; Dr. Weir, Padiham; Mr. Goddard; Mr. Davies; Mr. Smith, Canterbury; Dr. Andrews, Moseley; Dr. Bantock; Dr. Grimshaw; Dr. Potter: Dr. Tuckwell, Oxford; Dr. Ogston, Aberdeen; Mr. Wright, Leeds; Mr. J. G. Smith; Mr. Budd; Mr. Thomas; Mr. Hargreaves; Dr. Ching; Mr. Spencer; Mr. Evans; Dr. Havell, Reading, Mr. Sewell; The Secretary of the Royal Colleges of Physicians and Surgeons, Edinburgh; M.B.; M.R.C.S.L.; A Young Locum Tenens; W. H.; The Registrar of Births and Deaths; Nauticus; Studens; Officer of Health; W. T.; A Chemist; L.R.C.P., Salford; Medo; R. N.; Surgeon; L. M. N.; L. L.; M. W. S.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Cornish; Mr. Platt, Wigan; Mr. Horneycroft, Wolverhampton; Dr. Nelson, Birmingham; Mr. Poole, Dudley; Mr. Humphreys, Montgomery; Mr. Jennings, Folkestone; Mr. Harris, London; Mr. Manuel, Edinburgh; Mr. Moore; Mr. Parish; Dr. Farley, Belleville, Canada; Mr. Gibson, Malvern; Dr. Dowse, London; Mr. Lawrence; Mr. Sanders; Rev. P. J. Syrée, Canterbury; Dr. Lucas, Billingborough; Mr. Alden, Southampton; Mr. Evans; Dr. Barratt; Mr. Scott, Southampton; Dr. Reid, Arnold; Mr. Robertson, Barrow-in-Furness; Mr. Dougall; Mr. Francis; Mr. Deane; Rev. D. Brackenbury, Bournemouth; Mr. Hudson, Newport; Mr. Carter, York; Mr. Weekes, Chatham; Mr. Cautley, Killinghall; Mr. Brook; Mr. Neil; Mr. Gray, Rugeley; Mr. Birch, Newbury; Mr. Bellingham, Dudley; Dr. Sunning, Enniskillen; Mr. Green; Mr. Thomas; E. E. S.; F. G., London; G. H., Brixton; Medicus, Lynn; G. F. D.; G. H. G., Manchester; Surgeon, Grantham; S. E. B., Deptford; M. C., Sheffield; R., Guildford; Medicus, Newport; R. F. H., Stone; Medicus, Liverpool; G. F. P., Bayswater; G. N., Wolverhampton; J. G. B., Swindon; Medicus, Kidderminster; A. B., Stourport; Medicus, York; L. M. P.; Surgeon, Dorchester; M. R. C. M., Brixton; S. A. W., Islington; A. B.; Alpha; M. B., Huddersfield; E., London; W. R.; Clio; J. G. B.; Fornix.

Church of England Temperance Chronicle, House and Home, Paper and Print, Animal World, Wanganui Herald, Analyst, Vaccination Inquirer, Le Concours Medical, Madras Mail, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, August 7th, 1879.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Aug. 1	29·86	S.W.	63	62	109	76	59	0·24	Cloudy
,, 2	30·15	S.W.	63	57	94	75	54	..	Fine
,, 3	29·96	E.	63	59	90	74	56	0·34	Cloudy
,, 4	29·95	S.W.	64	61	99	74	57	..	Cloudy
,, 5	30·00	S.W.	62	58	86	67	53	..	Cloudy
,, 6	29·78	W.	61	56	108	68	51	0·10	Cloudy
,, 7	29·86	W.	61	55	108	70	53	0·06	Cloudy

Medical Diary for the ensuing Week.

Monday, Aug. 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 12.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Aug. 13.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Aug. 14.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Aug. 15.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 16.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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